Clinical Lecture

ON THE

THERAPEUTICS OF HEART DISEASE.

By THOS. OLIVER, M.D., M.R.C.P. LOND.,

PHYSICIAN TO THE INFIRMARY, AND LECTURER ON PRACTICAL PHYSIOLOGY AT THE UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

[AFTER dealing with the nervous mechanism of the heart, and the relationship of the beats of that organ to varying degrees of arterial tension, the lecturer proceeded with the following remarks on cardiac therapeutics.]

In the treatment of most of the forms of cardiac disease rest in bed is more or less a necessity; and yet rest in the recumbent position has perhaps, in this country at least, been too much insisted upon, for excellent results have been obtained abroad by Oertel and others by means of Alpine climbing, graduated gymnastic exercises, and massage. The experience of physicians in this country who have given this method of treatment a trial is favourable, due care being taken as to the selection of cases. Where the walls of the heart are extremely feeble, we do well, in the first instance at least, to reduce the strain which is thrown upon them, and so we keep the patient quietly in bed for a few days that he may be carefully watched. Called urgently to a case of old-standing heart disease, with feeble pulse and difficult breathing, and with secondary lesions in lungs, liver, and kidneys, you would at once lose no time in administering such stimulants as brandy, ammonia, or ether; but where time is given for a careful line of treatment to be adopted, you would naturally direct your attention to a list of drugs whose efficacy in restoring disordered states of the heart and circulation is known to you either practically or theoretically. It is to this class of drugs that the term "cardiac tonics" has been applied—tonics in the sense that they act slowly and improve the contraction of muscular fibre, rendering in the case of the heart the beat of that organ slower and more powerful. Pushed beyond this limit, however, they frequently tend to bring about disordered and irregular cardiac movements; hence the necessity for care as to their employment, and watchfulness as to the effects produced by them. Whenever therefore the propelling power of the heart is failing, these are the drugs that are called for.

Now, everything which tends to keep the blood in the heart, or behind it in the veins, is simply so much obstruction placed in the way of the circulation. Obstruction at the aorta, or at any of the valvular orifices of the heart, is an impediment to the circulation, to overcome the effects of which the heart or some of its chambers must hypertrophy. Regurgitation through any of the cardiac orifices acts almost exactly in the same way. It is an obstruction, for it delays the circulation and tends to rob the arteries of blood. And the drug which has for us the greatest interest is *digitalis*. In aortic obstruction, hypertrophy of the left ventricle is generally present to such an extent that, the driving power of the heart being thus increased behind the obstruction, sufficient blood is squeezed through the constricted orifice during systole, so that no medicinal interference is, as a rule, called for. And the same remark applies to many cases of mitral stenosis—the hypertrophied left auricle is quite sufficient to fill the left ventricle with blood, owing to the contraction of the auricle taking place during the longer of the two periods of the cardiac cycle. It is the failure of a compensation that has already existed, or when compensation fails to be developed, that causes the subject with cardiac disease to come to us for advice. In many of these digitalis acts well; but as these are the cases in which a dilated right ventricle is sooner or later developed, and with this hepatic fulness and gastric catarrh, the drug has frequently to be discontinued on account of the sickness which is present. The cases, in my opinion, in which digitalis acts satisfactorily are those of mitral regurgitation where the lesion has not been too long in existence, where slight dilatation of the left ventricle is present. In these, owing to the improvement in the tone of the muscular walls of the ventricle, not only is there a larger quantity of blood sent forward into the system under a higher pressure, but by the drug increasing in addition the contractility of the circular muscular fibres which surround the mitral orifice, mitral regurgitation is itself diminished, a smaller quantity of blood is driven backwards towards the lungs, pulmonary congestion is lessened, and the pressure on the right side of the heart is diminished. It is in regard to the employment of digitalis in aortic regurgitation that the greatest difference of opinion prevails. Contrary to the opinion of many writers, I regard digitalis as of the greatest service in the treatment of aortic reflux. But there are cases and cases of aortic regurgitation. This is the form of cardiac disease in which, while there is often great effort on the part of the heart, very low arterial tension is nearly always present. I have seen a few cases of aortic regurgitation with high tension pulse, and they have always struck me as being not only the cases most likely to have the greatest longevity, but as being those in which fewest cardiac symptoms are complained of. A patient who has gone about for twenty years with aortic regurgitation, and with well-filled arteries and pulse of good tension, is in a very different condition from one whose arteries are seen pulsating visibly, whose pulse is of low tension, and whose countenance is pale. The former, even after the lapse of these many years, may require no treatment at all; the other may be practically beyond the influence of all drugs. Still, I must confess that I do not share in the opinion that the use of digitalis is dangerous in aortic regurgitation. In the early stages of an ordinary rheumatic endocarditis involving the aortic cusps, the diseased condition develops as a rule slowly, and consequently aortic regurgitation takes place only to the slightest extent. When the regurgitation increases, owing to further shrinking of the newly formed tissue in the valves, the heart, under the stimulating influence of the slightly increased distending force, undergoes hypertrophy, its beats become a little more frequent, and thus there is restored to the systemic circulation *in time* what was robbed from it *in quantity* by regurgitation through the aortic orifice. It is at this stage of the disease that most cardiographers consider only one tendency is developed, and that is in the direction of dilatation of the left ventricle. Owing to the refluent column of blood from the aorta passing into the left ventricle during diastole, and coming into contact with that which is passing forwards from the left auricle, the cavity of the ventricle is thus said to be increased; dilatation occurs, but this is kept within limits by the walls of the ventricle undergoing hypertrophy. As in aortic regurgitation the refluent column of blood is regarded as the dilating force, anything therefore which tends to prolong the period of regurgitation not only increases the tendency to syncope by lowering the arterial tension and robbing the capillaries of blood, but tends also to produce over-distension or dilatation of the left ventricle, and the cardiac muscle, thus unable to contract in the face of this over-distending force, remains in a state of flaccidity or paralysis, and death in such might be the immediate consequence. These are regarded as the dangers or risks that attend the administration of digitalis in aortic regurgitation—dangers that may be diminished by keeping the patient in the recumbent position. It has always struck me as being strange that if the upright or semi-upright position is the one in which the refluent column of blood through the aortic orifice exerts the greatest degree of pressure within the left ventricle—pressure spoken of as dangerous,—why is it that patients who are the subjects of this affection so unhesitatingly, and frequently contrary to our advice, assume this position? I do not believe in the dangers of this distending force in the early stages of aortic regurgitation from disease of the valves if the nutrition of the heart is maintained. There is a tendency to dilatation, but any attempt to make the distension permanent at this stage is met by increased contractility and hyperplasia of muscular fibre. Only a fortnight ago I made a post-mortem examination on a case of old-standing aortic regurgitation, and I found the walls of the left ventricle nearly an inch thick, whilst the cavity could not be said to be above the normal. Nor do I believe that by lengthening the period of diastole you allow greater reflux to take place into the left ventricle, and thus tend to the production of those dangerous conditions to which I have alluded. My experience of the treatment of aortic regurgitation is that here, just as in other forms of cardiac

disease, your patient is likely to do well the nearer you can bring the beats of his heart to the normal. The cases of long-standing aortic regurgitation—twenty years and upwards—that I have seen are those in which the pulse ratio is low, whether they have been taking medicine to keep it thus or not; and I know of a few cases at the present time where to my knowledge the disease has lasted from seven to ten years, and the pulse is frequently as low as 44 per minute, without there ever having been the least feeling of syncope—the patients following their handicraft the while. Instead of regarding the prolongation of the period of pause in the heart as dangerous, and giving time for the left ventricle to be over-distended, what occurs is this: Admitting that the number of beats of the heart has been reduced by digitalis, then such slowing is not only accompanied by improvement in the contraction of cardiac muscular fibre, but also by increased arterial tension, which means not only that the capillaries generally are better supplied with blood, but that the coronary arteries, too, are better supplied, and consequently that the heart is better nourished. But I also think that under these circumstances the regurgitation is itself lessened, and for this reason the aortic orifice is more or less constricted by the contraction of its own circular muscular fibres, or if not to any great extent by them, by the prolongation of that period which is spoken of by Foster as the third phase in the systole of the left ventricle. The contraction of the left ventricle still continues after all the blood has been ejected from it, and if this period is lengthened the orifice of the aorta still remains constricted, and the easy escape of blood backwards into the left ventricle from the aorta is prevented. While I cannot recall one case in which digitalis could be regarded as precipitating the fatal issue in aortic regurgitation, I can recall very many which have experienced the greatest benefit from it. The drug has frequently disagreed and aggravated at times existing gastric symptoms, but this applies to all cardiac remedies. Wherever I have had satisfactory results, they have always come along the line I have already mentioned—viz., slowing of the heart's beat, increase of arterial tension and improvement of cardiac nutrition. But aortic regurgitation is generally associated with mitral regurgitation, and as we have seen in dealing with mitral regurgitation the action of digitalis is to narrow that orifice and thereby diminish reflux through it, so in these combined cases the mitral ostium is also narrowed, and thus owing to lessened regurgitation through it, an additional factor is brought into operation, whereby the arterial tension is raised. In all cardiac cases it is the sudden assumption of the upright position which is dangerous, and not simply the fact that it has been assumed. The ill effects which I have seen follow the employment of digitalis have been more upon the stomach than the heart, but as digitalis is a drug which raises arterial tension by causing contraction of the peripheral arterioles, and thus throws additional weight upon the heart, I would not use it in cases where I suspected fatty heart or extreme dilatation of the left ventricle, nor would I consider its employment called for in any case of cardiac disease, no matter the lesion, in which arterial tension was already high.

In *convallaria* we have an excellent substitute for digitalis in the treatment of many cases of aortic regurgitation. My best results from this drug have been obtained in aortic regurgitation, and next to that in mitral stenosis. In cases of aortic combined with mitral regurgitation I have frequently found it relieve, and that very quickly too, urgent dyspnœa over which digitalis had no effect. I am inclined to think that it acts purely as a cardiac tonic—i.e., directly upon the heart, by improving the tone of its muscular fibre. It is not a drug that, as a rule, is badly borne or causes gastric irritation, but in one of my cases of advanced mitral regurgitation its administration was always followed by sickness and vomiting.

Of *casca* I have had no experience.

Belladonna I look upon as a valuable drug in the treatment of heart disease. Whilst it diminishes the sensibility of the endocardium to the varying pressure exerted by the distending column of blood on the walls of the heart, thus lessening the sense of fluttering and palpitation, it has induced easier and more forcible beats of the heart, partly by improving the tone of the organ, and probably too by its somewhat dilating effect upon the bloodvessels. In cases of mitral regurgitation its efficacy is most marked. Many of my best results have been obtained from belladonna in cases, chiefly mitral, where digitalis and other drugs caused violent sickness. Belladonna in such not only gives relief to the difficulty of breathing, but relieves the gastric irritability as well.

From *caffeine* I have had good results, particularly in the treatment of mitral stenosis. I frequently combine it with convallaria, and have soon found arterial tension raised and diuresis increased. In only two of the several cases of mitral stenosis with dilated right ventricle in which I have employed it have I been obliged to discontinue it on account of sickness.

Through the kindness of Messrs. Christy of London I have had some experience of the beneficial effects of *Kola paste* in the treatment of heart disease. It is supplied in large irregular masses of a brown colour, not unlike chocolate, and is a paste into which the juice and substance of the Kola nut largely enter. Its efficacy as a nervine tonic has long been recognised in those places where the fruit abounds. By the inhabitants of such it is employed as an antidote to alcohol: men who are so intoxicated and rendered incapable of walking straight are said to become sober and recover their normal gait from within half an hour to an hour after taking the drug. To patients who are the subjects of heart disease I often give as a beverage for breakfast two drachms of the Kola paste mixed well with boiling water, sweetened with sugar, and either flavoured or not with vanilla; and from a repetition of this night and morning not only has there been increased diuresis (a fact explained by the 2 per cent. of caffeine which it contains), but good has also come from its action as a cardiac tonic and nutritive. Cases of mitral regurgitation have received much benefit from it, and some of my patients, the subjects of aortic regurgitation, have received so much good from it that they ask for its continuance, telling me at the same time that whilst taking it they pass a larger quantity of urine, and feel generally more comfortable. Dropsy I have seen disappear under its use. In the treatment of the headache complained of occasionally by patients the subjects of cardiac disease consequent upon contracted kidney and diseased arteries, I have had satisfactory results from its use.

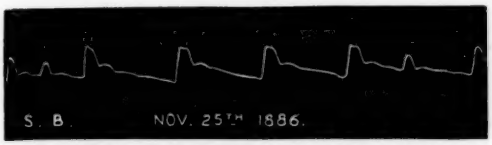
Next to digitalis—nay in many respects superior to it, I rank *strophanthus* as a cardiac tonic. Strophanthus is one of the most powerful cardiac tonics we possess. A few doses of the tincture are in many cases sufficient to produce in patients who are the subjects of aortic or mitral regurgitation a feeling of well-being and comfort, followed by complete relief to difficulty of breathing. In functional cardiac irregularity its effects are quick and lasting, while in many cases of advanced mitral regurgitation the difficulty of breathing is soon relieved, the pulse improved, and the quantity of urine increased. Similar results have been obtained in the treatment of aortic regurgitation. Patients unhesitatingly speak of the relief which is given to any præcordial pain that is present, of diminution of, or relief to, the numbness felt running down the left arm, of relief to dyspnœa, and of it creating a feeling of general well-being consequent upon the improved state of their circulation. Through the kindness of Messrs. Brady and Martin, of Newcastle-on-Tyne, I have tested the therapeutical values of ethereal tinctures made from the pericarp, hairs, and seeds of the plant. From the tincture made from the pericarp no decisive results were obtained, although one patient, the subject of aortic regurgitation who could not take convallaria without feeling sick, said that when the dose was pushed it relieved præcordial pain. It did not increase the amount of urine passed. The tincture made from the hairs—which in colour is not unlike that made from the seeds, a beautiful green—answered well. Its efficacy is less marked than that made from the seeds. It is not nearly such a strong diuretic. From my experience of the tincture made from the seeds, I regard strophanthus as a powerful cardiac drug; it acts quickly and strongly upon cardiac muscular fibre in small doses, but in large doses it is a cardiac irritant and muscular poison. Whatever improvement follows its administration is, I am convinced, from its special action upon the heart; more forcible contraction of that organ is induced, the general arterial tension is thereby raised, and diuresis is promoted. Old-standing cases of mitral regurgitation, with small feeble pulse, cold extremities, distended jugulars, and pulsating liver, have improved under its use; and yet, while this is the case, it is only right to mention that in not a few patients most unpleasant symptoms have been developed, such as sickness and vomiting, pain in the stomach, and diarrhœa—symptoms which,

while they have in many disappeared on reducing the dose of the drug, have in others only yielded on withdrawing the drug altogether. Its taste is somewhat objectionable, being extremely bitter. Three minims of the ordinary ethereal tincture is quite a sufficient, and to many rather a large, dose. As an illustration of the good effects of strophanthus I would point to the subjoined sphygmograms. (See Figs. 1 and 2.) In this case the effect of the drug was most

FIG. 1.

Deeply cyanosed; pulse feeble and rapid; ineffectual systole; mitral regurgitation; dilated left ventricle. Taken before treatment, when mitral murmur was not very audible.

FIG. 2.

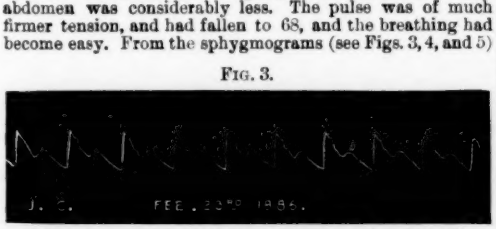


One week after taking strophanthus: much improved; pulse stronger and firmer; less ineffectual systole; mitral systolic murmur much more audible.

marked, and the case is typically one of those in which its influence is soon felt by the patient. Here, in addition to the mitral regurgitation and dilated left ventricle, there was much cardiac distress, shortness of breath, and ineffectual systole; several of the pulses failed to reach the wrist. A few doses sufficed to dispel the unpleasant cardiac symptoms, and restored the radial pulse to a very great extent. In cases, too, of functional cardiac derangement, palpitation, sense of fluttering, and enfeebled cardiac action, strophanthus has, in small doses combined with stimulants, answered well.

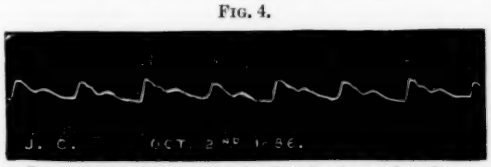
In *sulphate of sparteine* we have a drug (dose one to three grains) of whose beneficial effects as a cardiac tonic I can speak highly. Probably its action as such is indirect. In one of my cases of aortic and mitral regurgitation ascites developed, due perhaps to some subacutely inflamed condition of the peritoneum as much as to the state of the heart. The distension of the abdomen was so great that the breathing became much impeded by interference with the descent of the diaphragm. The action of the heart was much embarrassed. The patient was very ill. His pulse was soft water-hammer, and 110 to the minute. A few days after the administration of sparteine the distension of the abdomen was considerably less. The pulse was of much firmer tension, and had fallen to 68, and the breathing had become easy. From the sphygmograms (see Figs. 3, 4, and 5)

FIG. 3.



Sphygmogram taken when first under treatment for aortic and mitral regurgitation. Pulse of low tension.

FIG. 4.



Taken on readmission six months after the above, when the abdomen was filled with fluid, and there was œdema of feet, with pulse extremely rapid and of low tension. Tracing taken before treatment.

FIG. 5.

Taken a few days after the preceding, when he had received considerable benefit from sparteine and digitalis; ascites disappearing; large quantities of urine being passed. Pulse had fallen from 110 to 68 beats per minute; tension much increased coincident with improvement in health. No albumen in urine.

it will be observed that the tension had considerably risen, and that it bears some resemblance to the tracing taken in Bright's disease. Corresponding with the rise in the arterial tension and that of feeling generally better, the amount of urine passed rose from twenty to ninety ounces daily, and in less than a fortnight not only had the whole of the ascites disappeared, but the ordinary cardiac symptoms depending upon the aortic regurgitation had also ceased to trouble him; this, be it remembered, at a time when his pulse was only 68 per minute, the half of what it was on admission, when the period of cardiac diastole was so lengthened that in accordance with the usually accepted opinion the effect of aortic regurgitation should have been at its worst. In this condition, and with a pulse of high tension, the patient left the infirmary feeling quite well, and returned to his work as a machinist in the Elswick works. I have seen him since from time to time within the last few months, and he tells me that he has felt better since this last illness than he has done for the last six years, the date to which he ascribes the origin of his cardiac affection. His case is not only an illustration of the absence of danger in producing lengthening of the cardiac diastole, but is also a striking one of the good effect which is produced upon the heart and thus, upon the system in general, by slowing the pulse and raising at the same time arterial pressure. Another thing which was noticed in this case was that, while the aortic diastolic murmur was quite easily heard and recognisable before the treatment was commenced, its audibility was much increased—a fact which, while it points to an increase in the force which drove the blood backwards as it had done forwards, may also have been due to increased constriction of the aortic orifice—either stronger contraction of the circular muscular fibres at its orifice, or prolongation of the third phase in the systole of the left ventricle. Sparteine has always seemed to me to act very much in the same way as digitalis—i.e., by causing contraction of the peripheral arterioles. Arterial pressure is thus raised, the coronary arteries are better flushed, cardiac nutrition is improved, and the left ventricle thereby responds with greater vigour and force to the stimulus of distension created by the column of blood within it. Other dropsical effusions quite irrespective of heart disease—e.g., ascites from cirrhosis of the liver, pleural effusions—have disappeared under its use, and in any case of dropsy where the pulse is small and compressible I should regard sparteine as a drug extremely likely to do good.

Barium chloride, I find, raises arterial tension and thus acts as a diuretic. With half-grain doses morning and evening, several of my cases of aortic regurgitation have had their pulse ratio reduced, the pulse rendered fuller and firmer, and the amount of urine increased. Its action as a cardiac tonic is indirect.

Venesection has fallen too much into disuse. In several of my cases, both of aortic and mitral regurgitation, I have not only succeeded in warding off impending death, but by removing blood from the veins have placed the patient in the enjoyment of good health for months to come, repeating from time to time as necessity arose subtraction of blood from the arm. In cases of over-distension of the right ventricle, where the jugular veins are swollen, the face livid, the pulse small, and dyspnœa urgent, I have never hesitated to remove from eight to twelve ounces of blood from the vein in the arm, or failing this from any very distended vein at a reasonable distance from the heart, with, in most cases, almost immediate relief to the breathing, improvement of the pulse, and with increased comfort to the patient. The removal of blood relieves the over-distended right ventricle, wards off the paralytic condition into which its walls are being thrown as the result of over-

distension, and, by allowing the muscular fibres to contract upon diminished contents, life has been saved. The use of stimulants at this time must never be forgotten.

And if venesection as an old remedy is not nowadays sufficiently practised, the same remark applies to the administration of *mercury*. Neither in recent endocarditis, nor in the treatment of the conditions leading up to it, is mercury ever called for; but in cases of old-standing mitral disease, where the venous system generally is engorged, the liver enlarged, and its venous channels over-distended, the employment of pil. hydrarg. c. coloc., in two to four grain doses at bedtime or for a few days at first night and morning, with or without the addition of squill, will be often followed by the happiest results. It will in almost every case form a useful adjunct to any line of treatment which is adopted. Calomel is again being resorted to as a remedy in cardiac dropsy.

In the treatment of angina pectoris nothing has answered so well as the inhalation of a drop or two of *nitrite of amyl*, but in many cases of aortic regurgitation attended by constant and very severe præcordial pain, with paroxysmal exacerbations, I have had the most satisfactory results from the internal administration of nitrite of amyl, beginning with two minims, and increasing it to ten, fifteen, or twenty minims, combined with ten minims of tincture of opium and twenty minims of sal volatile.[1]

In the treatment of the insomnia of heart disease we have two reliable and safe drugs that we can fall back upon. *Paraldehyde*, in doses of from fifteen to thirty grains, answers well. The sleep is similar to that induced by chloral, but, unlike this drug, it does not depress the action of the heart. I have not found it act as a diuretic, as some assert. The only and a most important drawback to it is its very unpleasant taste. Patients simply refuse to take it after a few trials. Not so with *urethan*, which I have found, in doses of ten grains and upwards, to be one of the safest hypnotics in cardiac disease. It is in heart disease that we frequently see patients thoroughly worn out for want of sleep. Nay, they are even afraid to sleep, for no sooner has sleep been induced than, the cyanosis increasing, they suddenly wake up and gasp for breath. Opium and its allies are most unsafe hypnotics where there is such a carbonised state of the blood; they only add to the accumulation of waste products in the blood. Chloral, too, cannot be given without running the risk of inducing cardiac failure. It is in such cases that urethan acts well, and is perfectly safe. It is less unpleasant than paraldehyde; in fact, if there is any marked unpleasant taste with the drug, the probability is that it is of English and not of German make. I have seen a patient, the subject of heart disease, who had not slept for several days, fall into a calm and placid sleep after a few grains of urethan, waken from it calmly four or five hours after without any dyspnœa, and express himself as feeling quite a new man to what he had been a few hours previously. After this the whole character of the case has been changed, and patients who until then had been retrogressing not only began to improve, but ultimately made a good and fairly lasting recovery.

[1] It is only of late that I have had experience of the value of the nitrites in the treatment of mitral stenosis. Dr. Barr, in the *Liverpool Med. Chir. Journal* for July, 1886, draws attention not only to the inefficacy of digitalis, but to the harmfulness of the drug in mitral stenosis. In such cases, while the systemic arteries are under-filled, the vessels of the lung are over-filled, as are also the left auricle and the chambers of the right side of the heart. The left ventricle, compared with these, is practically empty. What is wanted is an increase of force in the right ventricle and a reduction of the contents of the pulmonary vessels. No cardiac tonic will produce this alone without acting upon the left ventricle. If you increase the capacity of the arterial system, relief may come to the over-distended lungs and the veins generally. In one case of mitral stenosis with hæmoptysis, urgent dyspnœa, dilated right heart, and small feeble pulse, the relief given generally by nitrite of amyl was most marked.

A NEW HOSPITAL AT ZANZIBAR.—According to the *Bombay Gazette*, Mr. Tharia Topun made an offer to the British Government, on the day of the celebration in Bombay of Her Majesty's Jubilee in February last, to build and endow a hospital at Zanzibar. The estimated cost of building the hospital will be about 80,000 rupees, and Mr. Tharia Topun has offered a further sum of 150,000 rupees for maintaining the institution on a permanent basis, which amount the British Government will hold in trust for the donor. The institution will be named the Tharia Topun Hospital. The offer has been accepted by Lord Salisbury, as Foreign Minister, on behalf of Her Majesty's Government.

EFFECT OF RESPIRATION AND DEGLUTITION ON THE VENOUS HUM.

BY GEORGE R. MURRAY, B.A. CANTAB.

THE venous hum, as heard in the large veins of the neck, is a murmur which gave rise to much discussion as to its situation when Bouillaud first drew attention to it. He named it "bruit de diable," and considered that it was an arterial murmur, an opinion which was also held by other French writers. It was first shown to be a venous murmur by Dr. Ogier Ward in this country. This murmur has been found to be of little practical value in diagnosis, and consequently attracts much less attention now than it did formerly.

The venous hum is most distinctly heard on auscultation over the lower end of the right internal jugular vein, in the neck of a patient suffering from anæmia; and when studied in this situation it illustrates some points which are perhaps of physiological rather than medical interest. As it occurs in a vein just outside the thorax, this murmur is exposed to influences which cannot be brought to bear on intra-thoracic murmurs. Thus we find marked changes in the venous hum are brought about by respiration and deglutition. Before proceeding to the consideration of these changes, it is necessary to review briefly the conditions which produce the venous hum.

The internal jugular vein is slightly dilated at its lower end into a kind of sinus, which is so attached by the cervical fascia to the surrounding structures that it cannot shrink. When the volume of the blood is diminished in anæmia the upper part of the vein shrinks, but its lower part retains its former size. The blood flowing from the narrowed vein above into the relatively dilated part below sets up a fluid vein, and as the blood contains fewer red corpuscles than it does normally, it is the more readily thrown into vibrations. It is now generally supposed that the vibrations of the fluid vein produce the murmur, and in some cases a fine thrill can be felt. It is important to bear in mind that the loudness of a murmur so produced varies with the rate of the flow. The faster the flow the louder the murmur, and conversely slowing of the flow diminishes or stops the murmur. Changes in the rate of the blood-flow in the vein may be brought about by variations in either internal or external pressure. The former is illustrated by respiration, and from some observations which I have made, the latter appears to be illustrated by deglutition.

With regard to respiration.—In some cases slight variations in the venous hum can be heard during normal breathing, the murmur being louder during inspiration than during expiration. If, however, the patient makes an inspiratory effort with the mouth and nose closed, a distinct increase in the loudness of the murmur can be heard; and conversely a slight expiratory effort, made in the same way, stops the murmur. These facts are practical illustrations of the two effects of respiration on the blood-flow in the veins towards the heart: first, the increase in the rate of the blood-flow, due to the diminished intra-thoracic pressure during inspiration; second, the slowing of the blood-flow during expiration, caused by the rise of intra-thoracic pressure. The effects are much better brought out when the entrance or exit of the air is prevented, as then the whole force of the inspiratory or expiratory muscles brought into play is expended in aiding or retarding the flow of blood into the thorax.

With regard to deglutition.—I find that during the act of swallowing the venous hum in the internal jugular vein ceases. This is a fact to which I believe attention has not before been drawn. It is most conveniently observed in the following manner:—Place the patient in the erect posture, with the head slightly turned to the left, and apply the stethoscope over the lower end of the right internal jugular vein, just above the clavicle. Then get the patient to swallow a mouthful of water. The venous hum which was previously heard ceases during the act of deglutition, and can be heard to recommence as soon as it is over. A possible explanation, and one that seems to me to be probable, is that this cessation of the venous hum is brought about by external pressure, exerted by the omo-hyoid muscle on the internal jugular vein during deglutition. The possibility of compression of the internal jugular vein by the omo-hyoid muscle was suggested by Theile. A consideration of the anatomical relations of the omo-hyoid muscle and the internal jugular vein, and of the action of

some of the muscles which aid deglutition, will show how this may be brought about.

The posterior belly of the omo-hyoid muscle arises from the upper border of the scapula, just internal to the notch. From this point the muscle runs forwards and inwards across the lower part of the neck, passing behind the sterno-mastoid muscle. It here becomes tendinous, and bends upwards, passing just in front of the internal jugular vein. It then becomes muscular again, and the anterior belly ascends to be inserted into the body of the hyoid bone. The tendinous part of the muscle passes through a process of the deep cervical fascia which is attached to the cartilage of the first rib. This process of fascia maintains the bent position of the muscle, but may allow the tendinous portion to be pulled slightly upwards when the muscle contracts or is put on the stretch; for this muscle acts as a tensor of the cervical fascia. The two ends of the muscle and the central tendon appear so to lie that the line of action of the muscle is in a plane which slopes from above downwards, forwards, and outwards. Consequently, when the muscle contracts or is put on the stretch, the part of it which lies just in front of the internal jugular vein is pulled upwards, backwards, and inwards against the vein, so as to compress it.

Now, in deglutition, we find that the omo-hyoid muscle is first put on the stretch and then contracts. At the end of the first part of deglutition, the hyoid bone is raised by the action of the genio-hyoid, anterior belly of digastric, and mylo-hyoid muscles, the omo-hyoid being thus put on the stretch. Immediately afterwards the omo-hyoid contracts with the other depressors of the hyoid bone, so as to bring the hyoid back into its normal position. Thus it would seem that the cessation of the venous hum is due to the tension and subsequent contraction of the omo-hyoid muscle, compressing the internal jugular vein, and so retarding or arresting the flow of blood as to stop the murmur.

It may be maintained that the omo-hyoid muscle could not thus exert sufficient pressure. Much pressure, however, is not necessary, for the wall of the vein is thin, the blood in the vein is at a low pressure, and the murmur is easily stopped by pressure on the vein, either with the finger or with the stethoscope itself. It may also be here mentioned, in conclusion, that pressure thus exerted on one internal jugular vein causes an increase in the loudness of the murmur in the other, from the increased rate of blood-flow along it, showing how readily one internal jugular vein returns blood from the brain when the flow in the other is obstructed.

Torrington-square, W.C.

A TABULAR STATEMENT OF SIXTY-FOUR CASES OF ABDOMINAL SECTION,

INCLUDING FORTY-FIVE COMPLETED OVARIOTOMIES; WITH REMARKS.[1]

BY C. J. CULLINGWORTH, M.D.,

PHYSICIAN TO ST. MARY'S HOSPITAL, MANCHESTER; PROFESSOR OF OBSTETRICS AND GYNÆCOLOGY AT THE OWENS COLLEGE; VICE-PRESIDENT OF THE OBSTETRICAL SOCIETY OF LONDON.

THE profession has become so accustomed to long lists of successful operations by leading ovariotomists in this country that it needs some boldness on the part of those of us who have worked in a more limited sphere to publish our results. It has always appeared to me, however, that whoever accepts a hospital appointment undertakes grave responsibilities—not only to the institution he serves, but to the profession of which he is a member; and that not the least of the responsibilities which come under this latter head is that of making public from time to time the results of his hospital experience, and of endeavouring to present them in such a shape as will make them useful to his professional brethren. It is under the influence of this conviction that I publish the accompanying statement of my cases of abdominal section. It was my original intention to give an account of the work of the last three or four years, but it soon became apparent that such a course would make my results appear better than in the aggregate they really are; and I decided that it would be more honest, and probably more instructive, to include in the statement all my cases from the year 1873 (when I first operated) to the present time, a period of fourteen years. It seemed to me that I should thus not only secure myself against the charge of suppressing unfavourable statistics, but furnish myself with a more useful text for discussing the operation and comparing past and present results.

My earliest experiences in abdominal surgery were perhaps even exceptionally disheartening. The first ovarian case that came under my care was that of a woman with a multilocular tumour, sixty-six pounds in weight. The size of the abdomen was enormous. The legs and trunk were œdematous, and the uterus and vagina had been pushed downwards by the tumour until they formed a hernial protrusion outside the vulva. The thoracic viscera were also very considerably displaced. As the gelatinous character of the contents of the tumour rendered quite fruitless an attempt to give the patient relief by tapping, I thought it my duty to try to remove the growth. I succeeded in removing it, but unfortunately my patient died. My next two cases were even more discouraging. In each of them I was unable to complete the operation on account of inseparable adhesions. Both the patients died. During the year that elapsed between these two incomplete ovariotomies, it happened to me to have two cases of extra-uterine fœtation, in both of which abdominal section was required. Again both my patients died; so that my record, after four years, stood thus: five abdominal sections with five deaths. It was a disastrous beginning; but luckily the tide turned, and, during the ten years that have since elapsed, I have had no case of ovariotomy in which I have been unable to complete the operation.

The cases that form the basis of this communication are arranged in two tables. Table I. consists of all my completed ovariotomies, arranged in two series,—the first series extending over the seven years from 1873 to 1879 inclusive, the second series embracing a similar period from 1880 to the close of 1886. Table II. consists of all my cases of abdominal section (to December, 1886) not included in Table I. They necessarily form a somewhat miscellaneous collection. I shall have a few words to say about them presently. In the meantime I wish to draw attention to one or two points of interest in the first table.

The total number of completed ovariotomies is forty-five; of this number, eight are included in the first series and thirty-seven in the second. Of the eight cases operated upon before 1880 four died, giving a mortality of 50 per cent. Of the thirty-seven cases operated upon during the last seven years five died, giving a mortality of 13·5 per cent. If the later cases of this series be compared with the earlier, the improvement is still more striking. All the deaths occurred amongst the first seventeen cases; of the last twenty (covering a period of three years) every one recovered. Side by side with this reduction in the mortality, it is to be observed that the progress of the successful cases towards recovery has become more rapid, more even, and generally more satisfactory. It has come to be quite exceptional for a case to cause even a single day's anxiety; and troublesome complications, such as suppuration along the suture tracks of the abdominal wound, which used to be common enough, have become the rarest possible events.

How is this improvement to be accounted for? It cannot be due entirely to chance, although that is an element which one should not altogether overlook. Nor is it that the more recent cases have all been particularly simple and uncomplicated. Take, for example, the last three on the list. In each of them, as the table shows, there were complications of a very marked kind; in two instances there were serious adhesions, in the other there was no proper pedicle. Notwithstanding which, the patients did exceedingly well, the temperature during the first fortnight being, with scarcely an exception, below 100° F. What, then, *are* the causes of the diminished mortality and the lessened frequency of interruptions to normal convalescence?

Foremost amongst these causes must, I think, undoubtedly be ranked the improvements introduced from time to time in the method of operating. Most of the cases recorded in the first series were operated upon at a time when the most experienced ovariotomists advocated the use of the clamp in the treatment of the pedicle. The reintroduction of the intraperitoneal method of dealing with the pedicle was an immense improvement, and its adoption had a most favourable influence on the statistics of the operation. Almost simultaneously with this advance came the general recognition of the value of antiseptic precautions in surgery. The mortality after operations had hitherto been chiefly due to septicæmia. Prof. Lister taught us by his researches and example that

[1] Read before the Manchester Medical Society, February 2nd, 1887.

TABLE I.—COMPLETED OVARIOTOMIES IN HOSPITAL AND PRIVATE PRACTICE.

SERIES I., 1873 TO 1879

No.	Name.	Age.	Civil cond.	Date of operation.	Nature and weight of tumour.	Adhesions.	Antiseptic.	Treatment of pedicle.	Condition of other ovary.	Result.	Remarks.
	A. H.	45	W.	1873. Oct. 17	Enormous multilocular cystoma with thin walls and thick gelatinous contents, pushing up liver to 3rd rib, and causing protrusion from vulva of uterus and vagina; weight, 66lb.	Very numerous	None	Returned	Not recorded	Death in 32 hours	Autopsy disclosed recent peritonitis over whole of lower part of abdomen, glueing intestines together.
2	S. B.	46	M.	1877. July 27	Single cyst left ovary, with solid mass in ant. wall; weight, 11lb. 2oz.	None	None	Clamp (removed Aug. 2)	Not recorded	R.	—
3	F. S.	20	S.	Sept. 12	Large pilliferous cyst of right ovary with solid masses in cyst wall, and some smaller cysts grouped around them; 9lb. 6oz.	Slight parietal	None	Clamp (removed Sept. 16)	Not recorded	R.	Had been tapped three times previous to operation.
4	M. A. R.	22	S.	Oct. 31	Compound cyst left ovary, consisting of a mass of small cysts with thick walls interspersed with much solid matter; 8½lb.	Slight omental	None	Clamp	Right ovary size of walnut, cystic; removed	Death in 34 hours	Septicæmia. Pulse and temp. gradually rose from time of operation, until at 9 A.M. on the following day the pulse was 178, the temp. in recto 105·4°; at 5 P.M., temp. 106·9°; at 6, 107·0°; at 7, 107·2°; and at 8.20 (5 minutes after death), 106°.—*Autopsy:* Heart universally adherent to pericard. from old inflammation; right lung cong., lower lobe dark red, solid, friable. Recent perit. in neighbourhood of pedicle.
5	S. B.	24	S.	Nov. 7	Simple cyst of right ovary; 17lb. 2oz.	None	None	Clamp (removed on 11th)	Not recorded	R.	Temp. on 3rd day rose to 103·6°, pulse to 160. Some sloughing of pedicle after removal of clamp; wound open and discharging for nearly 5 weeks.
6	E. F.	27	M.	1878. June 19	One large cyst and many small ones; 14lb. 6oz.	None	Carbolic acid spray and other precautions	Ligatured and returned	Not recorded	R.	Highest temp., 102·2° on 3rd day. Next day 2 drachms of purulent fluid exuded from the wound, which continued to discharge for several days.
7	M. F.	34	M.	Aug. 2	Multilocular ovarian cyst; 10lb. 8oz.	Extensive parietal	Thymol spray	Ligatured and returned	—	Death on 13th day	Maximum temp. on 2nd day, 103·5°; on 3rd day, 102·9°; on 4th and 5th, 101°; on 6th, 101·4°; on 7th, 102·6°; on 8th, 101·2°; on 9th, 103·4°; on 10th, 103·6°; on 11th, 104°; on 12th, 102°; and on day of death, 105·4°. On the 11th day wound was opened and abdomen explored. No pent-up secretion, but intestines matted together from recent perit. No post-mort. permitt.
8	M. D.	33	S.	1879. Dec. 17	Large multiloc. cystic sarcoma; 30lb. 14oz.	Universal	Carbolic acid spray, &c.	Ligatured and returned	—	Death in 26 hours	Patient emaciated and weak; collapse during operation extreme. Death probably due to shock.

SERIES II., 1880 TO 1886 (TREATED ANTISEPTICALLY).

No.	Name.	Age.	Civil cond.	Date of operation	Nature and weight of tumour.	Adhesions.	Drainage, glass tube.	Condition of other ovary.	Result.	Remarks.
9	C. D.	26	M.	1880. March 23	Multilocular cyst of left ovary, 4lb. 14oz.	Omental, intestinal	2 days	Normal	R.	Lower angle of wound reopened, pedicle sloughed, indiarubber drainage tube worn April 8th to 24th. On Aug. 10th the sinus at the lower angle of wound was 1¼in. deep. Blood was noticed issuing from wound during 2nd and 6th menstrual periods. In November wound had closed.
10	P. H.	24	S.	July 14	Multilocular cyst of left ovary	None	3 days	Enlarged, cystic: removed. (Had amenorrhœa 16 months before admission.)	R.	August 17th, well and strong; not menstruated.
11	S. S.	43	M.	1881. Jan. 12	Round and spindle-celled sarcoma of right broad ligament, 7lb. 13oz.	Numerous to mesentery	Throughout	Both ovaries normal	D., 69 hours	Septicæmia. Temp. an hour before death, 103·4°; pulse, 150.
12	E. C.	33	M.	April 13	Single cyst, right ovary, 37lb. 8oz.	Slight to omentum	None	Normal	R.	Five months pregnant at time of operation. Aborted April 21st, 9.35 P.M.
*13	M. A. D.	30	M.	Aug. 18. 1882.	Single cyst, right broad ligament, 26lb. 10oz.	Intestinal	None	Cystic (small); removed	R.	—
14	M. K.	26	M.	Jan. 3	Sihgle cyst, 10lb. 2oz.	None	None	Normal	R.	Two months pregnant. Aborted April 20th, after return home; fœtus dead, apparently at 5th month.
15	B. B.	36	M.	Jan. 18	Single cyst, left ovary, 14lb. 12oz.	Parietal	None	Cystic (small); removed	R.	—
16	M. R.	46	M.	Jan. 25	Cystic sarcoma, both ovaries, 5lb. and 4lb. 10oz.	Parietal and to each other	36 hours	See under "Nature of Tumour"	R.	Died shortly afterwards from return of disease in peritoneum, &c.
17	E. H.	29	M.	March 15 May 5	Single cyst, right ovary, 6lb. 2oz. Peritoneal disease, with double ovarian cyst, embedded in friable, semi-fœtal	None	None Throughout	Normal See under "Nature of Tumour"	R.	Had been
18										

14	M. R.	36	M.	Jan. 18	Single cyst, left ovary, 14lb. 12oz.	Parietal	None	See under "Nature of Tumour"	R.	Died shortly afterwards [illegible] toneum, &c.	87.
15	B. B.	36	M.	Jan. 18	Cystic sarcoma, both ovaries, 5lb. and 4lb. 10oz.	Parietal and to each other	36 hours				
16	M. R.	46	M.	Jan. 25							
17	J. H.	28	S.	March 15	Single cyst, right ovary, 9lb. 2oz.	None	None	Normal	R.	Had been tapped once previous to operation.	
18	E. H.	29	M.	May 5	Peritoneal disease, with double ovarian cyst, embedded in friable semi-transp. growth; no pedicle	—	Throughout	See under "Nature of Tumour"	D. next day	Syncope or septicæmia. Had been tapped nine times previous to operation.	
19	F. C.	45	S.	May 19	Single cyst, left ovary	Parietal	None	Atrophied and hard; not removed	R.	—	
20	M. B.	64	M.	Aug. 23	Cystoma of left broad ligament, 9lb. 1oz.	Parietal, omental	Throughout	Right ovary cystic; removed	D. 8th day	Temp. normal for 24 hours, then gradually rose until evening of 4th day, when it was 100·3°; highest temp. on 5th and 6th day, 101·2°; on 7th day, 101·6°; and on day of death, 100·4°. Death from peritonitis, septic (?) and old mitral disease.	
21	M. H.	46	M.	Oct. 11 1883.	Multilocular cyst, right ovary, 19lb. 14oz.	Parietal, numerous	None	Normal	R.	Abscess in abdominal wall burst through wound Oct. 16th.	
22	L. B.	28	M.	March 2	Multilocular cyst, left ovary, 12lb. 6oz.	Uterine, omental, intestinal	Throughout	Removed on account of tumour in right broad ligament	D., 38 hours	—	
23	S. B.	29	M.	April 18	Single cyst, right ovary, 12lb. 8oz.	None	None	Cystic; removed	R.	Highest temp., 100·2° F.	
24	M. S.	20	S.	May 23	Multilocular cyst, left ovary	Parietal, omental, and to right broad ligament	24 hours	Enlarged and indurated; removed	R.	Highest temp., 102°; wound discharged after removal of tube.	
25	M. A. K.	46	M.	Sept. 12	Double multilocular cystic sarcoma, peritoneum studded with nodules	Lower tumour adherent to mesentery and post. wall of pelvis	Throughout	See under "Nature of Tumour"	D. 9th day	Peritonitis.	
26	M. S.	26	M.	Dec. 12 1884.	Cystic sarcoma of both ovaries	None	None	See under "Nature of Tumour"	R.	Highest temp., 101·6°; after first two days normal. Died April 22nd, 1884, from recurrence of the disease.	
*27	M. E. H.	42	S.	Jan. 31	Single cyst left broad ligament, 24lb. 5oz., ovary healthy	None	None	Size of pigeon's egg, cystic; removed	R.	Temp. never exceeded 100° F. Had been tapped 12 times during past 20 years.	
28	M. A. D.	51	M.	Oct. 8	Simple cyst, right ovary, 25lb. 7oz.	Parietal, costal, omental	5 days	Atrophied; undisturbed	R.	Much shock; rallied in a few hours. Highest temp. during convalescence, 104·0°, at 2 A.M., Oct. 12. Had been tapped 4 times previous to operation.	
29	E. R.	34	S.	Oct. 22 1885.	Multiloc. cystoma, left ovary, 12lb. 3oz.	Parietal	7 days	Cystic, size of hen's egg; removed	R.	—	
30	E. M.	16	S.	Jan. 14	Large multilocular cystoma, left ovary, 17lb. 10oz.	None	None	Size of pigeon's egg, cystic; removed	R.	Patient has never menstruated. During convalescence had pelvic hæmatocele, causing dulness and hardness, first on right, afterwards on left, to 4½in. above pubic level. Diagnosis confirmed by aspiration.	
31	A. W.	60	W.	Feb. 4	Unilocular, right ovary, 9lb.	None	48 hours	Normal	R.	Had been tapped twice previous to operation. Multilocular cystoma of left ovary removed successfully in May, 1887.	
32	S. A. T.	50	M.	March 11	Multilocular cystoma, right ovary, 8½lb.	None	None	Cystic, size of cricket ball; removed	R.	—	
33	A. P.	33	M.	May 29	Multilocular cystoma, 34lb.	Parietal, hepatic, omental	24 hours	Normal	R.	Slow convalescence. Patient much reduced by recurrent peritonitis and recent parturition. Had been tapped once previous to operation.	
34	H. F.	57	M.	June 24	Multilocular cystoma, left ovary, 12lb.	Parietal, extensive and firm	48 hours	Dermoid cyst, 3½oz.; removed	R.	Had been tapped six weeks previously.	
35	S. A. P.	39	M.	Sept. 9	Multilocular cystoma, right ovary, 7lb.	Parietal and omental	48 hours	Cystic, not much enlarged; removed	R.	—	
*36	S. B.	22	S.	Nov. 12	Large thin-walled multilocular cystoma, gelatinous contents; thickened omentum; proliferating masses on peritoneum	Parietal, omental, intestinal	7 days	Cystic; removed	R.	Temp. same evening, 100°; afterwards never above normal. Twelve months afterwards patient well and at work. Exploratory puncture had been made two weeks before operation with no result.	
37	E. W.	43	W.	Nov. 25 1886.	Multilocular cystoma, right ovary, 8½lb.	None	None	Normal	R.	—	
38	E. C.	40	M.	Feb. 10	Multilocular cystoma, right ovary, 25lb.	Parietal, omental	48 hours	Normal	R.	—	
39	M. G.	35	S.	March 17	Multilocular cystoma, left ovary; much solid material; 8lb. 2oz.	None	24 hours	Cystic; removed	R.	Slight suppuration in abdominal wall during convalescence.	
40	E. T.	34	M.	Sept. 15	Single cyst, 33lb.	None	None	Normal	R.	Pregnant two months. Patient confined naturally May, 1887.	
41	M. A. J.	30	S.	Oct. 6	Single cyst, right broad ligament, 11½lb.	None	48 hours	Cystic, not much enlarged; removed	R.	—	
42	B. B.	55	S.	Nov. 10	Single cyst, left broad ligament, 11lb.; small pedunculated sub-peritoneal fibroid of uterus also ligatured and removed	None	None	Atrophied; normal	R.	—	
43	M. S.	41	M.	Dec. 1	Cystoma, left ovary; 12lb. 8oz. (fluid, 5 quarts)	Extensive pariet. and omental	96 hours; removed with difficulty	Normal, but removed on account of closely contiguous cyst of right broad ligament	R.	Temp. during first fortnight uniformly under 100°; afterwards, once exceeded 100° from chill during removal to general ward.	
44	A. H.	32	M.	Dec. 15	Thick-walled ovarian cystoma (left), 4lb.; contents, 3 pints of odourless pus	Omental and intestinal, the latter very firm and vascular	adherent 24 hours	Normal	R.	Site of adhesion on bowel 1½in. × ¾in., divested of peritoneum, raw and bleeding. Edges of peritoneum at its border stitched together, doubling in and concealing the raw surface, to prevent fresh adhesion. Temp. only once reached 100°, and never exceeded it; from and after morning of 4th day normal.	
45	G. H.	48	M.	Dec. 28	Large multilocular cystoma of right ovary and broad ligament; pedicle very short and broad; tied in sections; portions of cysts left in stump. Weight of tumour, 11lb. 13oz.	None	48 hours	Normal	R.	Temp. first six days uniformly under 100°; max. on 7th, 100·2°; on 8th and 9th, 100·6°.	

* The cases marked with an asterisk were private operations; the rest were hospital cases.

MADE IN BRITAIN

TABLE II.—ALL THE CASES OF ABDOMINAL SECTION NOT INCLUDED UNDER THE HEAD OF COMPLETED OVARIOTOMIES, 1874-1886.

No.	Name.	Age.	Civil cond.	Date of operation.	Object and nature of operation.	Result.	Remarks.	Reference to detailed account of cases already published.
1	M. P.	32	M.	April 24, 1874	Incomplete ovariotomy.	D.	Tumour very large, multilocular, chiefly solid. Operation abandoned on account of universal adhesions.	—
2	E. D.	36	M.	July 2, 1875	Exploratory incision for supposed suppurating ovarian cyst. Removal of putrid fœtus from an extra-uterine gestation-sac.	D.	Patient suffering from septicæmia at time of operation; died from septic broncho-pneumonia on sixth day after operation.	*Obstetrical Journal of Great Britain*, October, 1875
3	M. B.	26	M.	Nov. 10, 1875	Removal of dead fœtus from extra-uterine gestation-sac.	D.	Patient declined operation until septicæmia had set in. Fæcal fistula in posterior wall of sac. Died 66 hours after operation.	*Obstetrical Journal of Great Britain*, January, 1876
4	A. B.	61	M.	July 5, 1876	Incomplete ovariotomy.	D.	Enormous tumour; operation abandoned on account of intimate connexion with uterus. Died 56 hours after operation.	—
5	E. M.	46	M.	Feb. 7, 1877	Exploratory incision in case of large accumulation of pus between layers of abdominal wall (from rupture of ovarian abscess) simulating ovarian cyst.	D. 7 hours	... ...	THE LANCET, November 3rd, 1877
6	E. McD.	40	M.	Aug. 7, 1878	Nature of tumour doubtful; exploratory incision; uterine myoma; wound closed.	R.	After operation tumour gradually diminished in size, with relief of symptoms and great improvement of general health.	—
7	J. H.	36	S.	June 9, 1882	Nephrectomy for hydronephrosis.	D. 12 hours	... ...	*British Medical Journal*, Nov. 11, 1882, p. 930
8	F. J. H.	45	M.	March 7, 1884	Removal of pedunculated subperitoneal myoma of uterus. Weight 15oz.; pedicle clamped.	D. 3rd day	Septicæmia.	—
9	H. B.	37	S.	Nov. 5, 1884	Nature of tumour doubtful; exploratory incision; uterine myoma; wound closed.	R.	—	—
10	E. B.	30	M.	Jan. 2, 1885	Abdominal section with a view to nephrectomy; pyonephrosis; removal of impacted calculus from right ureter.	D.	Left ureter discovered, at autopsy, also to contain impacted calculus, causing abscesses in left kidney. Death from uræmia (?) 80 hours after operation.	Trans. Path. Soc. of London, vol. 36 for 1884-5, p. 278
11	A. McC.	25	M.	May 13, 1885	Removal of chronically inflamed ovary and small polycystic tumour of each broad ligament.	R.	... ...	*British Medical Journal*, January 30, 1886
12	M. M.	26	M.	Oct. 7, 1885	Small cystic tumour of each ovary with right hæmatosalpinx.	R.	... ...	
13	J. R.	35	M.	Jan. 13, 1886	Exploratory incision for recurrent pelvic peritonitis, with small intra-pelvic tumour; removal of three small broad ligament cysts with right hydrosalpinx. Ovaries not removed.	D.	Died on third day from peritonitis (? septic).	—
14	E. J.	40	S.	Feb. 5, 1886	Removal of uterine appendages for large myoma with excessive hæmorrhage. Both ovaries cystic. Ovaries and tubes removed.	R.	Very slight uterine hæmorrhage for some months after operation, but no flooding. Ten months afterwards myoma much diminished in size, general health very greatly improved.	—
15	E. B.	43	M.	April 14, 1886	Exploratory incision for supposed ovarian cystoma. Removal of large sarcoma of left kidney, which had undergone extensive cystic degeneration.	R.	After patient's return home the disease rapidly recurred, causing tumour over right lower ribs posteriorly, and eventually paraplegia. Died Nov. 26, 1886, seven months after operation.	*Medical Chronicle*, November, 1886
16	M. B.	25	M.	April 30, 1886	Exploratory incision for recurrent pelvic peritonitis, with small fixed intra-pelvic tumour on right of uterus. Right ovary enlarged (3 inches long), cystic; one large cyst filled with pus; universally adherent; removed, with both tubes, which were much thickened, and contained in their walls several cysts.	R.	Drainage tube, 48 hours. Convalescence rapid. Six months after operation, patient stout, well, and free from pain.	—
17	M. H.	45	M.	Oct. 29, 1886	Exploratory incision with view to removal of the uterine appendages, if practicable, for multiple uterine myoma with excessive hæmorrhage and recurrent pelvic peritonitis. Pelvic contents densely matted, neither ovaries nor tubes distinguishable. Adhesions undisturbed; abdominal wound closed.	R.	Left the hospital Nov. 27, much improved in health.	—
18	M. B.	62	M.	Nov. 17, 1886	Exploratory incision for supposed ovarian cyst. Malignant disease of liver and peritoneum, with ascites and matting of intestines against post. abdominal wall. Fluid evacuated. Wound closed.	R.	Left the hospital in a fortnight. Wound healed; abdomen refilling.	—
19	E. G.	30	S.	Nov. 24, 1886	Cæsarean section in case of flattened and generally contracted pelvis. Conjugate diameter, $2\frac{5}{16}$in.	D.	Child saved.	Communicated to Obstetrical Society of London

The operations in this table were all performed in the hospital.

this cause of failure could be largely eliminated. I am aware that some of our most successful operators reject the theory upon which the antiseptic method of Lister is based, and, without adopting the details of that method, have achieved brilliant results by scrupulous attention to cleanliness alone. But no one, I think, will deny that this minute and painstaking solicitude with regard to the cleanliness of hands, instruments, sponges, and dressings is the direct outcome of the teaching of Lister, and that even those who do not follow out his method in detail owe the improvement in their results very largely to the recognition of the great principle that underlies that teaching. Scarcely less important than the improvements already mentioned were the introduction of the glass drainage tube of Kœberlé and Keith, and the recognition of the value of dry and infrequent dressings, with the advocacy of which the name of the late Mr. Sampson Gamgee will always be honourably associated.

Again, there can be no doubt that the change for the better is partly to be attributed to the greater dexterity that comes of increased personal experience. Another cause that has influenced our results for good is the more general agreement that exists as to the desirability of operating early and the evils of preliminary tapping, the consequence of this being that practitioners send us their cases before they become quite so desperate, and before the constitution of the patient has become seriously undermined. Further, the interest of late years awakened in abdominal surgery has led to improvement in our methods of diagnosis, and cases of ovarian disease are now recognised at an earlier period of their development than was usual a few years ago.

Lastly, there are one or two circumstances special to St. Mary's Hospital, Manchester, that have materially contributed to lessen the death-rate after operation. During the earlier years of my connexion with the hospital, the board of management, noting the fact that Manchester and Salford provided the greater part of the funds for carrying on the work of the hospital, considered that the recipients of its benefits ought, as far as possible, to consist of persons resident in these towns; hence, they placed great restrictions on the admission of patients from out-lying districts. As a natural result of this policy, country patients drifted to other hospitals where admission was more easily obtained, while our patients at St. Mary's were drawn chiefly from the slums of Manchester and Salford, and largely consisted of women whom poverty and vice, and other unhealthy conditions, had rendered highly unfavourable subjects for operation. Six or seven years ago a wise change was introduced, and it is now as easy for patients from the country to obtain admission as those from the town. One other circumstance that has told in our favour must also be mentioned—viz., the anxious care manifested by the hospital authorities during the last few years with regard to the sanitary arrangements, which are now probably as satisfactory as they can be in so old-fashioned a hospital.

(To be concluded.)

A CASE OF TYPHLITIS;

EVACUATION OF LOCALISED PERITONEAL ABSCESS; RECOVERY.

BY ALBERT WILSON, M.D,
AND
RICKMAN J. GODLEE, M.S.

IN view of the difference of opinion amongst surgeons as to the best method of dealing with a localised collection of pus in the neighbourhood of the cæcum, when general peritonitis is supposed to have supervened on acute typhlitis, the following case may be of general interest.

H. S——, a groom, seventeen years of age, who had previously enjoyed good health, was said to have strained his side six weeks before he was first seen by Dr. Wilson, on Oct. 23rd, 1886. He complained of no symptoms till about the 17th, when he thought he took cold; this, at all events, was the date of the commencement of his illness. On the 21st and 22nd some rigors occurred, and on the 23rd he was brought to his home. He was then suffering from intense pain in the abdomen, especially on the right side, the tenderness here being so great that a complete manual examination could not be made. The temperature was 102·5°, and the pulse 100. The bowels at the commencement of the attack had been confined, but had been moved after some aperient medicine which had been previously given. Dr. Wilson at once ordered hot fomentations to the abdomen, and ten minims of tincture of opium to be taken every two hours, with some carbonate of soda to relieve the flatulence. On the 24th, 25th, and the early part of the 26th, the condition remained about the same, or rather improved, except that a swelling, small at first, was noticed in the right iliac fossa, which gradually increased to the size of a small orange. The tenderness, however, had diminished. On these days the temperature varied from 100° to 101°, and the pulse was always about 100, a little over or under. The tongue was thickly furred, and there was no action of the bowels. The treatment was continued, and the patient was fed upon beef essence, beef-tea, and milk in moderate quantities. In the evening of the 26th there was a sudden alteration in the symptoms, the pain and tenderness suddenly becoming much more acute and extending over the whole abdomen; so great were they, in fact, that he could not bear the weight of the bedclothes, and complained if anyone walked across the room. The temperature rose to 103·5°, and the pulse to 120, the latter being thready and weak. The countenance was ashy pale, and there were all the symptoms of collapse. It seems clear that at this time the peritonitis became general. Thirty grains of salicin were administered.

In the morning of Oct. 27th the patient's condition became worse, the temperature rising to 103°, but afterwards falling to 99°, and the pulse being 104, and hardly perceptible. Vomiting also set in, so that any food or brandy was at once returned. The breathing became altogether thoracic, and retention of urine occurred. He rallied, however, in the afternoon, and when we saw him together at 4 P.M. it was decided at once to make an incision into the now very marked swelling on the right iliac fossa. Chloroform was therefore administered, and a cut about three inches long was made by Mr. Godlee through the abdominal muscles below the anterior superior iliac spine, as if for ligature of the external iliac artery. In the deeper parts the tissues were infiltrated with inflammatory products, and when the peritoneum was reached and incised exit was given to about an ounce of extremely offensive pus. This occupied a small cavity, the posterior boundary of which was formed by coils of small intestine loosely held together by soft adhesions; but as the suppuration appeared to be completely localised, and as no pus welled up from the pelvis, the utmost care was taken not to break down these adhesions. The cavity was very gently swabbed out with a little solution of corrosive sublimate (1 to 500), and some iodoform was introduced; a drainage tube was inserted, and the wound was dressed with salicylic wool. It was decided to feed him with peptonised nutrient suppositories, and to keep him thoroughly under the influence of opium. After the operation the patient was somewhat relieved, though still very weak. Vomiting continued during the night, the material brought up having on one occasion a somewhat fæcal smell; indeed, the vomiting, though gradually subsiding, lasted for three days, only ceasing on the 31st. On the 29th the case was further complicated by the onset of diarrhœa, which prevented the rectal alimentation and lasted for a day or two. The vomiting and straining at stool caused a protrusion of a knuckle of intestine between the lips of the wound; the gut soon assumed a bright-red velvety appearance, and from its prominence prevented the reintroduction of the drainage tube. It became necessary gently to press the bowel back into the deeper part of the wound, and to retain it there by means of a pad of boracic lint kept in place by strips of plaster. The discharge in the meantime continued to be very fetid, and was expelled from the wound mixed with bubbles of air. For these three days the patient's state remained very critical, and we have to thank Dr. MacDonald, Dr. Wilson's assistant, for his unremitting care and attention during this period of the case. The temperature gradually rose from 97·8° to 99·2°, but the pulse fell from 130 to about 80.

Between Nov. 1st and Nov. 7th there was a gradual improvement in the abdominal symptoms and in the appearance of the wound, though the discharge continued to be offensive. The diarrhœa and vomiting had ceased, and the patient was able to digest peptonised corn-flour. He had, however, always an evening rise of temperature, which on one occasion reached 102·2°; the pulse also was again close upon 100. This increase of fever was no doubt accounted for by the fact that a small left parotid bubo occurred, which did not suppurate, but subsided without causing further trouble.

After Nov. 7th convalescence was uninterrupted, except on one occasion, when, after the bowels had been confined for a week, the temperature rose to 102°; they were relieved by an enema, and the temperature at once fell to normal. By Dec. 7th cicatrisation was complete, and the patient was sent to the seaside for a fortnight. He has since returned to his occupation, and remains quite well.

Most, if not all, will agree that as soon as there is distinct evidence of the presence of localised suppuration in the neighbourhood of the cæcum, it is the best practice to go in search of it; in other words, that the patient will have a better prospect of recovery if exit be given to the pus, than if he be left to the chance of the abscess bursting into the bowel. But there is room for differences of opinion as to whether, if there be signs of general peritonitis, it is not better to make a mesial incision, with the object of purifying the general abdominal cavity in the event of this peritonitis being purulent. It must be borne in mind that it is quite possible for general peritonitis to supervene after the formation of a localised peritoneal abscess, and that although the pus in the latter may be exceedingly offensive, the lymph or serum in the former may be, if not aseptic, at least free from smell. A case is recorded in the Transactions of the Clinical Society,[1] in which the same condition of things as that which was present in our patient was met with; but the diagnosis was rendered obscure by the absence of any marked local swelling. Here a mesial incision was made, and the intestines were found intensely injected from very early peritonitis. The abscess was first opened through the mesial incision, and the fetid pus was thus allowed access to the general peritoneal cavity. In spite of this, however, the patient made a good recovery; but it should be added that those parts of the peritoneal cavity over which the fingers and the pus had passed were, as far as possible, treated with corrosive sublimate solution (1 in 500), and that the abscess was drained through a second incision in the groin. The lesson to be learnt, if it be fair to generalise from a consideration of two cases only, appears to be that if pus be suspected in the neighbourhood of the cæcum, it is best at first to make an incision in the groin, even although there be reason to think that general peritonitis has set in. If the abscess be then found to be distinctly localised, all will have been done that is necessary. If, however, it be clear that the general peritoneal cavity is full of fetid pus, the surgeon may proceed to make a mesial incision with the object of gaining free access to the rest of the abdomen and to the pelvis, though it must be confessed that any attempt at purification under such circumstances is an almost hopeless task. The occurrence of the parotid bubo adds another to the long list of cases where an association between this condition and peritoneal inflammation has been observed.

A CASE OF COMPOUND FRACTURE;

AMPUTATION; SECONDARY HÆMORRHAGE; REAMPUTATION; RECOVERY BY PRIMARY UNION.

BY A. PIERSON, M.R.C.S., L.R.C.P. LOND.,
SURGEON, INDIAN MEDICAL SERVICE.

H——, aged twenty-eight, a Mussulman railway labourer, well nourished and healthy-looking, was admitted into a camp hospital on the Bolan State Railway on October 16th, 1886, with a compound fracture of the left tibia just above the ankle joint. The patient had been standing on a stack of loose rails, when one of them had turned over on its side and caught his leg. There was considerable bruising of the soft parts, but as the wound was small the hospital assistant in charge of the camp decided on trying to save the leg. He therefore syringed out the wound with carbolic lotion, dressed it with carbolic oil, and put up the leg in splints.

I saw the man for the first time on Oct. 29th. The discharge from the wound looked dirty, and the dressing could not be kept antiseptic. The patient was removed on a bed by train to the chief railway hospital, a distance of nine miles. On Nov. 5th I advised him to submit to amputation, as the discharge was profuse and offensive in spite of all carefulness in dressings. He stoutly refused, but on Nov. 8th he was put under chloroform and the leg amputated at the knee joint. This was necessary, as the skin was swollen and infiltrated lower down. On cutting out the posterior flap, I noticed that the skin was thickened and the subcutaneous tissue decidedly watery. A higher operation, however, was thought to be unjustifiable, as it was impossible to say how far the septic poisoning extended. The operation was therefore completed, and the wound dressed with iodoform and wool. His evening temperature before operation had been 99·8° or 100° for about six days. On the evening of the day of operation the patient's temperature was again 100°, but on the next night it rose to 103·8°. The wound was then dressed and found to be sweet, but the discharge was unhealthy.

Nov. 10th.—Morning temperature 100·4°. Discharge smelling. Evening temperature 103°.

11th.—The posterior flap is beginning to slough; it is commencing from a circular ulcer which has appeared between the two condyles of the femur, and has apparently been caused by infected lymphatics, as no pressure from bandaging could have been exercised on this particular spot, situated as it is between two bony prominences. After this the whole of the posterior flap sloughed off, leaving the two condyles quite bare and the artery visible between them. The temperature then fell to normal, and rosy granulations sprang up on all sides, and the artery was rapidly covered.

The temperature remained normal, with only occasional rises, apparently due to malaria, until Jan. 17th, 1887, when it rose to 100° in the evening. The wound caused by the sloughing of the posterior flap had gone on admirably at first. Then the patient's strength had begun to flag about Dec. 15th and a bedsore had formed on his sacral prominence, and after this the skin-forming had come to a standstill on the ulcer. At the end of December and beginning of January the granulations had a congested, flabby appearance.

On Jan. 20th—that is to say, two months and twelve days after the amputation—secondary hæmorrhage set in. The blood spurted from the granulations in three streams, one central over the artery and two lateral. Luckily, the assistant surgeon was on the spot, and at once applied an elastic band to the femoral artery. I decided to amputate again, seeing that the healing process had apparently stopped in the ulcer. Amputation was performed through the lower third of the thigh. Troublesome hæmorrhage (i.e., oozing) occurred after the operation, and the flaps were not closed for at least half an hour. Two hours and a half afterwards hæmorrhage came on again. The assistant surgeon opened the flaps, and found a small bleeding point which he tied. Two hours after this the dressings were again observed to be soaked through. I therefore again took off the dressings, washed out the flaps with a solution of perchloride of iron (1 in 8), sewed up the flaps, and applied two antiseptic sponges on each side of the incision. The stump was then firmly bandaged to the splint, and elevated on a high pillow.

Jan. 22nd.—Sponges removed and stump found to be quite sweet. Iodoform and wool applied. Temperature normal.

26th.—Wound dressed again for the purpose of removing the drainage tube and sutures. After this the wound required no trouble, and healed perfectly with the exception of a small collection of pus (about fifteen minims) which occurred in the course of a suture scar. This sent the temperature up to 100° on the ninth and tenth days after operation.

Feb. 20th.—Wound has been healed for some time, and the stump can be handled without causing any pain.

The amputated portion of the thigh was examined after the operation, and it was found that the granulations were large and flabby, and full of blood. They could be squashed like jelly beneath the fingers, and were easily peeled off the subjacent tissues. The prominent parts of the condyles on their posterior surfaces were carious and breaking down. This could not be seen except by first clearing off the granulations. The artery was traced down the popliteal space to the site of the ligature, and it was found to be pervious right up to it. There was no trace of the ligature (a catgut one), but the constriction was well marked. A probe easily went through, and the artery was found to be continuous with and moulded into a mass of large spongy granulations gorged with blood. I should not forget to state that the shaft of the femur when sawn through at the second operation did not appear healthy. The medulla bulged out like a watch-glass, and was abnormally congested.

Bolan Pass.

[1] A Case of Suppuration around the Vermiform Appendix treated by Abdominal Incision, by T. Barlow, M.D., and R. J. Godlee. Vol. xix., p. 88.

A CASE OF

OBSCURE ABDOMINAL ABSCESS; PERFORATING ULCERS OF STOMACH AND DUODENUM.

WITH REMARKS.

BY ANDREW MILLER, M.D. EDIN.

THE case here recorded is one of a class which present so much difficulty in diagnosis, and are therefore so difficult to treat successfully, that I feel it is a matter of great importance that each instance should be laid before the profession. At present but few observers have published cases resembling the one narrated below, and little or no mention of them is to be found in the standard works of reference, such as Leube's article in Ziemssen, &c. Under these circumstances, it is only to isolated pathological records that the profession can turn for information concerning these rare and dangerous groupings of symptoms. The following case, which occurred in my practice, may be briefly given.

For ten years before Mr. A——'s last illness he had been subject to attacks of abdominal pain, diffused in character, and referred to no particular region, but generally to the lower part and left side of the median line of the abdomen. These attacks occurred in paroxysms, there being sometimes an interval of from one to three months, during which there was complete immunity from suffering. The pain, which was very severe, but indefinite in character, was ascribed by the patient himself to cold or prolonged abstinence from food, and seemed to be wholly independent of the ingestion of ordinary solids or liquids, which, indeed, he could take with perfect impunity. Mr. A—— was a very abstemious man alike in food and drink. The attack of abdominal pain sometimes lasted only a night, but at other times was prolonged for two or three days; the severity of each seizure, however, generally spent itself in from twelve to twenty-four hours. The beginning of his fatal illness was looked upon by all concerned, himself included, as identical in character with what he had suffered before, the abdominal pain at this time not even being nearly so severe as on many previous occasions. In one instance, when I did not see him, the pain was so intense as to give rise to the supposition that it might be due to the passage of a gall-stone; however, there was no direct evidence of such having taken place.

On the morning of Nov. 30th, 1886, I was called to see Mr. A——. I found him in bed, looking pale, drawn, and pinched, complaining of dull, diffused, aching pain below the umbilicus and to the left side of the median line. I elicited that, owing to the pain, he had passed a restless and sleepless night. As he had been travelling by rail the whole of the previous day, and consequently had only taken hurried meals at irregular and unusual hours, his suffering was at first attributed to dyspepsia; no objective symptoms had up to this time developed themselves. Temperature 97·4°; pulse 100; bowels confined. Physical examination revealed nothing more than slight tympanites, general tenderness of the abdomen, some meteorism, but no tenderness on palpation over the stomach itself. Hot fomentations were applied to the abdominal parietes, enemata of a pint of hot water administered to counteract the constipation, and three-minim doses of tincture of nux vomica given every three or four hours. In the evening the temperature rose to 100·2°. The fomentations had somewhat relieved the pain, and the bowels had been freely opened. On carefully examining the abdomen, dulness on percussion and a sense of resistance to pressure, as if from some mass or obstruction, were noticeable in the left lumbar region of the abdomen just below and to the left of the small cul-de-sac of the stomach. This "tumour" was always more or less distinctly to be felt from this time to the close of the illness, but the distinctness with which it could be made out varied inversely to the degree of flatulent distension of the intestines. The night which followed was a very restless one; the patient slept but little, although the pain was sensibly diminished. Twenty grains of bromide were therefore administered on the third night, with very good result. During the next four days the temperature fluctuated from 100° to 102°, the diurnal variations being slight except on the third day, when the morning temperature touched normal. With this exception, pyrexia existed till the occurrence of the hæmatemesis, which was followed by the fatal collapse. In spite of this exaltation of temperature, for which quinine in two-grain doses three times a day was exhibited, up to this time the patient's condition had not caused special anxiety, as the present attack in all other respects resembled its predecessors before mentioned. The pain had yielded to treatment; the patient was cheerful and appeared to be making daily improvement, took food with some relish, passed quieter nights, and had more sleep. He was kept on the simplest diet—milk, beef-tea, and sometimes a little chicken or fish panada. From the sixth to the twelfth day the patient became more restless; the temperature assumed a higher range, exhibiting a marked diurnal variation, touching 102·8° on the tenth day, and with a variation of four degrees on the eleventh day. Thirst became a troublesome symptom, and the tongue was dry and furred. On the twelfth day there were two loose actions of the bowels. Early on the night of Dec. 12th (thirteenth day of illness) the bowels acted twice; the stools were liquid and the colour of tar, suggesting melæna; and about a pint and a half of dark blood mixed and diluted with the fluid contents of the stomach, was vomited suddenly and without pain. This was accompanied by a fall of temperature, which on the morning of the fourteenth day reached 98°, and subsequently to this, on the nineteenth day, when the patient died, the evening temperature never exceeded 99·6°, while the morning temperature kept about normal, being sometimes a fraction of a degree above and sometimes a little below normal. From this moment, when the hæmatemesis took place, till the close of the illness there was very marked prostration, amounting to collapse, so that transfusion of blood was contemplated, and a surgeon kept himself in readiness, and every preparation was made for carrying out the operation. The physical signs, with the exception of slightly increased tympanites, remained much the same as before. During this anxious period the respiration was of the Cheyne-Stokes type, and the pulse was exceedingly weak, compressible, and too rapid to be counted. There was a little wandering of the mind at times, while the countenance wore an anxious look. The patient was kept on nutritive enemata of beef-tea and brandy, nothing being taken by the mouth for about two days, water to rinse the mouth and ice to suck alone being allowed to enter the stomach. During this period one-sixth of a grain of morphia was given twice a day hypodermically. The hæmatemesis not recurring, he was allowed a little champagne and some meat juice and beef essence. In spite of all we could do, there was no rallying on the part of the patient, who died on Dec. 18th, the nineteenth day of his illness. The symptoms already recorded persisted until death, with varying intensity. It may be remarked that the urine, tested frequently during the illness, at no time exhibited a departure from health.

Necropsy twenty-seven hours after death.—On opening the abdominal cavity, the small intestines were revealed uncovered by omentum. This, together with the stomach, were afterwards found to be displaced upwards and backwards, so as to be hidden beneath the ribs. The former—that is, the omentum—was further found to be implicated with the tumour. The liver occupied its usual position, and in every way appeared perfectly normal. Upon drawing the small intestines aside, the tumour, which had been felt during life, was found to consist of a mass occupying a position to the left of the median line, extending from the hypochondrium to the inguinal region, irregular and somewhat oblong in shape. Its walls were in places half an inch thick, and appeared to be made up of inflammatory tissue together with adhesions formed with the omentum, mesentery, pancreas, colon, and duodenum, and probably the pyloric end of the stomach, but owing to the matted and displaced condition of the tissues and the friableness of the walls of the tumour any great precision on these points was difficult of attainment. The adhesions were very dense, firm, and evidently of old standing. On cutting into the tumour, it was found to contain a considerable quantity of offensive pus. Its interior was lined by smooth walls, to which shreds of curdy material were attached. The cavity was easily capable of holding a man's clenched fist. On opening the stomach, the mucous membrane was seen to be of a dusky hue. About three inches from the pyloric opening a minute punched-

out orifice was seen on the posterior lower wall. There was no heaping up or tumefaction about the edges, simply a thinning of the mucous membrane, and no signs of inflammatory change upon the visceral aspect. On passing a probe through the perforation, the probe was found to enter the cavity of the abscess described above. Similar but smaller communications existed between the abscess cavity and the stomach; these were situated somewhat nearer the pylorus. Upon cutting down the intestines, an aperture was seen in the wall of the duodenum quite similar to the larger perforation described in the stomach, which in its turn also led into the abscess cavity. No other outlets from the pus cavity existed. Close examination revealed that these various communications were funnel-shaped, the larger end of the funnel being away from the stomach and duodenum respectively. The visceral opening was exceedingly small indeed, so small that pus in this stage of the malady seemed unable to obtain free exit. The mucous membrane of the intestines below the duodenum was healthy, and, in fact, all the other viscera were free from morbid change.

Remarks.—In reviewing the above case, certain points appear to deserve special attention. The clinical phenomena were so ambiguous as to prevent a correct diagnosis being arrived at, and even after the necropsy it was found difficult, if not impossible, to trace the order of pathological events which led to the fatal issue. Dr. Bristowe published in THE LANCET of Sept. 29th, 1883, cases which bear some resemblance to the above, and which may well be studied in relation with it; but in these there was either a distinct history of gastric ulcer perforating and leading to abscess, which in its turn perforated, giving rise to fatal collapse, or of ulceration occurring in the intestines, which anticipated extra visceral abscess. Now, in the case of Mr. A—— there was a history of ten years: slight dyspeptic trouble marked by paroxysmal attacks and abdominal pain, without any hæmatemesis, melæna, or distinct pain after food relieved by vomiting—indeed, vomiting was wholly absent in this patient's case. There is not evidence, I think, sufficient to indicate whether these attacks of pain were or were not manifestations of localised peritonitis, although it must be admitted that the facts furnished by the necropsy would point to such a hypothesis. If this supposition—for it can only be viewed as such—be entertained, it would appear that the last illness was, in fact, a kindling into activity of a pre-existing chronic abscess due to such localised peritonitis. How far the interference with the alimentary tract arising from Mr. A——'s travel was responsible for this renewed activity in the abscess it is impossible to say. At any rate, the increasing size of the tumour apparently encroached upon the stomach and duodenum, and ultimately by a process of ulceration produced openings into these hollow viscera. In support of this view it should be remembered that, although the patient had been frequently and carefully examined, no tumour of any size could be made out till the occurrence of his last illness, and it is equally certain that the adhesions and thickening about the collection of pus could not have been the result of an eighteen days' inflammation. The assumption that the abscess was a sequence of the ulceration of the stomach or duodenum appears to me wholly untenable, and for the following reasons. There never were any symptoms of gastric ulcer until the advent of the hæmatemesis and melæna, which occurred five days before death; and the appearanceof the perforations clearly indicated that they were produced from without into the viscera, the visceral opening being distinctly smaller than those looking into the pus cavity, while the mucous membrane in the stomach and duodenum in the vicinity of the perforation was absolutely healthy. It would appear that the purulent collection became infected probably through the thinned walls of the stomach or intestine, and took on a rapid infective course, leading to the hectic which marked the last attack, taking the abscess from the realm of harmless chronicity to that of a highly dangerous infective process. It is noteworthy that no general peritonitis existed, and that the patient at no time was the subject of rigors. In conclusion, I desire strongly to emphasise that I in no way wish to lay stress upon the explanation I have ventured to offer above. It appears to me to fit in with the facts as revealed by the necropsy. To others it may appear insufficient. My only object in bringing the case forward has been to state the facts of what I believe is almost a unique case. To others I would leave the explanation. The treatment throughout the case was practically one of expectancy. Judging after the fact, I regret that an exploratory incision was not had recourse to, for there is little doubt that such purulent collections, if diagnosed in time, might be treated by operative measures, with at least a fair hope of success.

Grosvenor-street, W.

THE INTERPRETATION OF DISEASE.

By H. CAMERON GILLIES, M.B.

The meaning of the initial depression.—That the condition of depressed vitality, referred to in my last paper, obtains before every case of acute disease I am, for myself, fully satisfied. Indeed, I do not expect anyone will deny that it is so—being so simple, so apparent a fact in every case. What, then, is the cause of it? what does it mean? Many and ingenious hypotheses have been advanced to explain this condition when observed, and to explain what is commonly regarded as the disease—the acute violent attack that disables the sufferer. Very few of these can stand examination; most of them are not worth the trouble. They are, as a rule, matters of fancy, and, even as such, not very good guesses. There are a few, however, that claim and shall have attention. But before doing so I may be excused for resuscitating a little more of the commonplace.

"The human body, like that of any other animal, is an organism in which by the chemical changes of its constituent parts potential is converted into kinetic energy, and these changes depend upon the presence within the body of energy-yielding substances."[1] It must be clearly understood that the body of itself has no inherent power whatsoever—that it lives and moves and has its being by virtue of energy and substance received from its environment. "Whatever amount of power an organism expends is the co-relate and equivalent of a power that was taken into it from without."[2] Not only are the larger and more apparent forms of action, such as of manual labour, under this law, but every organic act also; every beat of the heart, every movement of respiration, every twinkle of the eye, is under the same law, and implies so much energy spent, however small that may be. The principle goes even further than that. "No idea or feeling can arise save as the result of some physical force expended."[3] We now arrive at this, that no act whatsoever of mind or of body, however small and insignificant, whether voluntary or involuntary, in health or in disease, can have origin or execution except it be from physical energy derived from food taken into the body and there digested and assimilated. We cannot of ourselves by any effort of will generate the least conceivable quantity of vital energy. Every thought and every act implies the transformation in our bodies of so much organic matter as contained the energy spent on them in a latent state. In the human body there is no constant measure of energy. It varies not only at different periods of life, but from day to day and from hour to hour. There is, however, during the period of maintenance or adult life in a healthy person, an average measure of potential energy, the total sum of which day by day is perhaps approximately constant. This potential energy of maintenance is what has been appropriately called the physiological capital of the individual. It is really the true expression of the individual vigour, and determines the height of the *health line*, to which our most serious calculations are referred in the estimate and treatment of disease. The food we eat from day to day sustains the current account of our physiological transactions. It would be wrong, however, to adhere too closely to this analogy, for there is no distinction of kind or place between the physiological capital and the current account. The energy received at any given time is incorporated with and assimilated to the potential capital; and from the sum is drawn the measure that becomes kinetic in our life acts. The fact to remember is that the capital from day to day gives an approximately constant sum. That is the condition we call health.

A theory is advanced by Dr. W. B. Carpenter, which, because of the honest endeavour it shows in the direction of truth and of the measure of truth in it, and because it has had very general acceptance, is of some interest: "Ample

[1] Hermann's Physiology (Gamgee). [2] Herbert Spencer. [3] Ibid.

evidence is afforded by army experience of the special liability of soldiers to zymotic disease when on long and fatiguing marches, because, the respiratory process being reduced by the high external temperature, the products of waste tend to accumulate in the blood"—and so the organism is predisposed to disease. The *fact* here expressed is correct and valuable, but I venture to say that the explanation and the interpretation of it are wrong. The author himself seems to have had his suspicion, for he gives a further explanation in support: "There can be no doubt that it lowers the healthy vigour of the body generally, and thus renders it more liable to disease." That is good. All the facts of the case are there—all the elements that are necessary to get at the truth. We have labour, wear and tear of body-structure, and a great expenditure of energy; and as a consequence of these, exhaustion and fatigue and liability to disease. But surely the waste products, the débris of the spent tissues, are not here the *cause*. That a depression of the healthy vigour renders the body liable to disease is true—it is, in fact, the whole truth; but that the waste products are the cause of that depression is wrong. We cannot accept it that any result can predispose to produce its own cause—that the child is the progenitor of or determines its own grandfather. The labour is the cause, and that the waste products accumulate is only an accident and a part result of the real cause. Dr. Carpenter refers to the fetid secretions, excretions, and exhalations, and to the rapid putrescence of the victims to the Irish famine of 1847, in support of his theory; and he attributes all this to the uncleanly condition and habits of the people preventing exhalation from the skin of the waste products in the blood. But there is no meaning in saying that in such cases, as of famine, waste accumulates in the blood. The whole body is a waste product. There is not anywhere in the whole body a healthy part. It dies in the mass. Every tissue and cell is so far famished and diseased. Energy is not, and cohesion is not. The "internal relations" are exhausted; the "external relations," the forces of destruction and putrefaction, operate without any resistance, and because of that there follows all the conditions detailed. Properly considered, a victim of famine is dead before he dies. It is not correct to measure decay from the moment of total extinction, for it commenced when the body first began to suffer the effects of famine, and destruction is far advanced before the last flicker of life. The poor tenement of clay that is for our purpose the instrument of life fails not in any one part or organ, but in its total mass, and it is no wonder that "rapid putrescence" sets in after death. With every respect, I submit that the theory of Dr. Carpenter entirely fails—that it cannot be accepted as a guide or as an aid to the true interpretation of disease.

"It becomes a very interesting question," says Mr. Simon, "by what manner of action different kinds of privations are able to produce inflammatory excitement. Just in the same way as the setting sun produces darkness or the absence of its rays cold, it is not a positive product but a negative." There is an error here, of the *post hoc propter hoc* kind. It is not the privation that produces the inflammation, as shall be shown later on. The question is, however, of great value, and that especially because of his own answer: "In the present state of knowledge the only conceivable explanation is that the excitement is secondary, that a certain amount of textural death is the primary and direct result of the privation, and that the inflammation is a consequence." This doctrine, that textural death is the cause of inflammation, is of the very highest interest. I am disposed to accept it in its broadest and most comprehensive application—to give it, perhaps, more value than Mr. Simon meant it should have. That textural death is followed by inflammation in cases of traumatic injury is evident; we all see that. It is therefore extremely interesting to find Mr. Simon's theory coming into straight line at a long distance with facts so plain as to need no proof. Inflammation follows wounds we all know; it follows on privation, causing textural death, Mr. Simon tells us. In the one case the textural death is substantial and visible, local and sudden; in the other it is general, perhaps, and gradual, and, at any rate in its early stages, quite beyond the powers of our senses to detect. But the one is as real and as much a fact as the other, and they are both identical in purpose and effect. It matters not whether the disease be a simple cut, a broken leg, or a pleurisy—there is textural death, and textural repair follows in direct proportion to the textural vitality, to the physiological capital, to the potential energy of the individual, and destructive processes in the inverse ratio of the same. We die daily in the strictest physiological sense. Every second of our lives is a long history of physiological operations in which death and repair run parallel in our bodies. "We are kept from dissolution by foreign powers, and not by any powers in ourselves." If the natural and necessary textural death of physiological change overcome or exceed the parallel process of repair and restoration or restitution of tissue elements, then that is death actual in that measure. We may call the moral expression of it weakness or even disease; and if it proceed beyond recovery, it is dying, and, finally, total death, when the potential energy is run out. Malaise, weakness, disease, and death are in one and the same straight line. "*Predisposition to disease and disease are the same thing*" is the invaluable expression of John Brown, and therefore all the cause or forces of predisposition—defective food and warmth, overwork or dissipation, unhealthy surroundings, &c.—are also in the same straight line with disease and death. So that even Mr. Simon falls short of stating the whole truth. His "structural death" on which inflammation (disease) follows is itself secondary to a loss of energy that has gone before. The *dis*-ease is the expression of the functional derangement that is the necessary result of the textural death following on the primary loss or defective supply of energy to the organism. Disease in the accepted sense is therefore the fourth remove from the prime cause. All this listlessness and indisposition, flying pains and neuralgia, blood poverty and irritability or sleeplessness, loss of appetite and general weakness—the whole condition thus and otherwise variously described—are so many points in the inclined plane that extends from our remotest adverse environment downwards through all the gradations of disease till it end in death.

Several very interesting lines of thought invite attention at this point, but considerations of space forbid.

Brockley, S E.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SUCCESSFUL REMOVAL OF AN ABDOMINAL CYST OF EXTRAORDINARY SIZE.

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,

HONORARY SURGEON TO THE LEEDS GENERAL INFIRMARY, AND LECTURER ON PRACTICAL SURGERY AT THE YORKSHIRE COLLEGE.

OVARIOTOMY being such an ordinary operation, it would be quite unjustifiable to report a single case were it not that it presents special points of interest.

In saying that a patient, aged thirty-seven, was admitted to the Leeds General Infirmary on May 10th, 1887, suffering from abdominal tumour, it would be almost more correct to describe it as the admission of a huge tumour with a patient attached, had it not been for the fact that the woman actually walked from the cab to the ward. There was a history of fourteen years' abdominal enlargement, and of rupture of the cyst six years before admission due to a severe shake, the fluid being passed off through the kidneys at the rate of four pints a day for about three weeks. Her general health had been fairly good until the pressure, which had produced great œdema of the lower extremities, had interfered with her nutrition and had impeded locomotion. The appearance of the patient was most remarkable: thin and careworn, she lay on her side, coiled round her immense abdomen, which was nearly six feet in circumference two inches above the umbilicus, the tumour occupying the bed and the patient being pushed to the edge. She could only with difficulty lie on her back or left side on account of dyspnœa, and had to lie on her right side or to be propped upright. The ribs were expanded like alæ, the lungs were pushed upwards, and the apex of the heart was felt in the third left intercostal space, one inch and a half above the nipple and half an inch from the anterior axillary line. Very large veins coursed over the abdomen, which presented the usual signs of an ovarian tumour. From the length of time it had existed, the slight effect, except

from pressure, on her general health, the history of rupture without peritonitis six years before, and the presence of a very distinct wave as of thin fluid in one cyst, I diagnosed the cyst as parovarian, and from the fact of rupture I anticipated adhesions. At the operation on May 24th this turned out to be the case; the cyst was growing from the left broad ligament, to which it was attached by a pedicle, thus enabling it to be removed without interfering with the contiguous ovary. It was very extensively adherent over the front and upper part of the abdomen, and had some adhesions to the viscera both in the abdomen and pelvis. The cyst contained no less than eighty-five pints (ten gallons and a half) of fluid, of a dirty grey colour; specific gravity 1026, alkaline, and containing much albumen. A Keith's drainage-tube was used, which was removed on the fourth day, there being no discharge from it after the second day. Recovery was slow but uninterrupted, save for an attack of dyspnœa on the third and fourth days, apparently due to the heart and lungs being displaced and trying to regain their position. Relief was given by ammonia inhalation, and by firmly padding the abdomen, which was collapsed and perfectly flat.

It may be that cysts as large have been removed; but I cannot find the record of such a one, and I can safely say that I personally never previously saw one nearly as large.

Leeds.

BILHARZIA HÆMATOBIA.

By E. B. HARTLEY, V.C.,
SURGEON-MAJOR, CAPE MOUNTED RIFLEMEN.

IN THE LANCET of April 30th, 1887, I notice certain notes on this subject taken by Mr. W. K. Hatch in Bombay. It may not be out of place for me to offer a few remarks on the same disease as it occurs in King Williamstown, Cape Colony. For some years I have encountered occasional cases of hæmaturia among soldiers of the Colonial Forces. The numbers are limited. It is not until recently that I have treated numerous cases among boys and youths of ages varying from ten to eighteen years; the disease being clearly owing to the presence of the parasite bilharzia hæmatobia. The disease appears to be very common in this town among European lads. I have heard of no cases among females. The history is generally similar to that of the following case:—

A. R——, aged fifteen, a pale, anæmic, ill-grown youth, for three years or so has remarked blood in his urine. It generally comes at the termination of micturition, sometimes as pure blood, at other times it is intimately mixed with the urine, or lumps of congealed blood settle at the bottom of the vessel, the urine under the last circumstances being clear. There is sometimes pain, but in the majority of instances it is absent. The blood is worse after playing football or cricket or after taking any violent exercise. Has received no injury to the bladder, and can assign no reason for the advent of the blood in his urine. Does not feel ill, and knows a great many boys who have had the same complaint gradually get over it and appear to be none the worse afterwards. Has been in the habit of bathing a great deal in the river, but has been advised to discontinue doing so, as the doctors say this is the cause of the disease. Is in the habit of drinking rain water which is collected from a corrugated iron roof and stored in a barrel. The urine upon inspection appears either dusky coloured or intimately mixed with blood, and in some cases there are clots of mucus and epithelium at the bottom of the vessel. Under the microscope ova, as pictured by Cobbold and other observers, and described under bilharzia hæmatobia, are readily seen, the numbers varying in proportion to the quantity of blood. In only one case have I been able to detect the parasite itself. No opportunity of making a post-mortem examination has been afforded me. The disease is by no means common in the higher altitudes of this colony. During a residence of three years in Basutoland, some 5000 feet above the sea, I met with only one case, and that was an Indian coolie from Natal. As a general summary I would affirm that the disease is rare amongst grown-up men, but very common among boys; that it lasts from three months to three or four years, and that it does not appear to do any permanent damage to the individual. In two cases I have noted blood as being passed with the motions.

Treatment.—Injections of medicated lotions into the bladder I regard as perfectly useless, besides being very objectionable to the patient. I have tried quassia, iodine, carbolic acid, iron, nitrate of silver, hamamelis, iodide of potassium, gallic acid, &c. By the mouth I have given endless and varying drugs—ergot, gallic acid, hamamelis, acetate of lead, belladonna, buchu, matico, hyoscyamus, turpentine, carbolic acid, almond mixture, cod-liver oil, mercury, syrup of iodide of iron, santonin, &c. I cannot affirm that any of these have done much good. It is, however, pleasing to record that Blaud's pills (ferri sulph., gr. iiss., potas. carb., gr. iiss.), as described by Ringer in his book of therapeutics, afford very material relief to the symptoms, and in several cases a cure. I commence with three pills a day, and as soon as it is seen that the digestive organs are not upset, I increase the dose to six pills in the day. They must be persevered with for some two or three months. Other preparations of iron appear to be useful, but I cannot speak of them with the same confidence as being likely to reduce the quantity of blood passed. At present I am treating fifteen cases with it.

King William's Town, S. Africa.

SYMPATHETIC AFFECTIONS OF THE EARS.

By F. W. BENNETT, M.D.,
HONORARY ASSISTANT PHYSICIAN TO THE LEICESTER INFIRMARY.

Two cases which have occurred recently in my practice seem to present examples of a sympathetic relation between the ears.

The first was a man, aged about twenty-five, who had suffered from deafness for several months. The hearing distance on either side was about six inches. On examination mucus was diagnosed as being present in the middle ear on both sides. I incised the membrane on the left side, and by syringing through a Eustachian catheter removed a considerable quantity of mucus. The hearing distance increased to more than two feet. To my surprise there was a corresponding improvement on the other side; this latter was, however, only temporary, and had disappeared three days later. The left ear continued much better, but no further improvement occurred on the right side until I removed mucus by incision.

The second case is more interesting. A painter, somewhat anæmic, complained of recent deafness and pain on the left side, with constant humming on the right. On examination I found a recent collection of cerumen on the left side but nothing abnormal on the right. I syringed away a soft ceruminous plug from the left ear, when the patient said that not only had the deafness and pain gone, but the humming on the right side had ceased.

Possibly in the first case excitement, due to the unpleasant operation, so stimulated the auditory nerve as to render its perceptive power temporarily greater. In the second case, however, there was no excitement, no prolonged syringing required, and nothing whatever was done to the right ear. I could not but conclude that the soft plug had sufficed in the patient's anæmic condition to set up irritation, causing pain on the same side and tinnitus on the opposite.

Leicester.

MYELOID SARCOMA OF UPPER JAW; REMOVAL OF SUPERIOR MAXILLA; RECOVERY.

By ALFRED E. HIND, F.R.C.S.

THIS case was treated by me while I had charge of the Jersey General Hospital. It is in no way remarkable except for the very rapid recovery and almost complete absence of deformity.

Mrs. K——, a woman aged forty-two, came to the out-patient room on May 26th, 1886, complaining of a painful growth between the canine and second bicuspid teeth on the upper alveolus on the left side. She stated that about two years previously a decayed tooth (first bicuspid) had been extracted, but that after extraction the wound never healed, and she soon noticed a fleshy nodule projecting in its site. This nodule has been growing slowly since.

On admission into hospital there was found between the canine and second bicuspid teeth a projection from the alveolar margin. It was softer than the normal gum tissue and covered with mucous membrane; its colour was dark

red. The nasal fossa on the affected side was not encroached upon. There was a little depression of the palate on that side, but so slight was it that it was scarcely noticeable. The cheek was, on careful comparison, found to be perhaps a little raised. The orbit was not affected. On the day after admission I removed the second bicuspid tooth. With it came away a piece of what was evidently sarcoma tissue. There was a little bleeding. The alveolar walls were found to be separated by a soft new growth which extended upwards into a distended antrum. On May 31st, the patient being under chloroform, I removed the superior maxillary bone, after reflecting a cheek flap. This was done by an incision extending through the upper lip in the middle line passing round the ala of the nose up to within about half an inch of the inner canthus, and thence passing outwards to the malar prominence. There was free bleeding for a moment while the cheek flap was being dissected up, but this was arrested by firm pressure. After separating the attachments of the bone by means of bone forceps, the bone was found to be so much thinned that it was impossible to get firm hold of it with a pair of lion forceps. It was easily removed piecemeal with a pair of parrot-bill forceps. It was found necessary to remove almost the whole of the floor of the orbit, as the new growth was attached to its under surface. The cavity was firmly plugged with dry lint and iodoform, and the edges of the wound brought into apposition by sutures. No dressing was applied except a piece of lint soaked in ice-cold water. The whole external wound healed by first intention. Patient's temperature never rose above 100°. She left the hospital on June 19th with a strip of lint lightly plugged into the cavity. By the middle of August she was able to wear a set of artificial teeth, the plate of which completely covered the deficiency of the palate. The scar was almost imperceptible, and no deformity resulted. On July 12th of the present year there was no sign of any recurrence. As the tumour was a myeloid sarcoma, encapsuled and confined to the superior maxilla, the whole bone having been removed, the chance of its recurrence is not great.

Jersey.

TYPHO-MALARIAL FEVER.

By J. G. LAFFAN,
COLONIAL MEDICAL SERVICE.

THERE prevails in the Mediterranean a fever known variously as "Rock," "Levant," "Mediterranean," or "Cyprus" fever, according to the name of the locality in which it occurs. A disease running a similar course is known on the west coast of Africa as "coast" fever, in Western Australia as "colonial," and soldiers are familiar with "Peshawur" fever on the north-west frontier of India. All cases of this fever resemble one another; but, as a rule, they can be divided into classes.

Class 1—and I have found that the greater number of cases may be placed in this class—contains all those cases in which great fluctuations of temperature, with or without rigors and sweating, are observed, in addition to many of the typical signs of typhoid fever. This class of cases I propose to call "malario-typhoid," as signs of malaria predominate.

In Class 2 I would place all those cases, so common in tropical climates, in which are found nearly all the signs of typhoid (the rash is generally absent), but in which abnormalities occur pointing more or less to the presence of malaria. To such cases the term "typho-malarial" seems peculiarly appropriate.

The differential diagnosis of these two varieties is difficult during the first week of the attack. At the end of that time, in most cases of Class 1, the tongue, which had been, hard and dry, brown-furred and red-edged, becomes moist and clean; if diarrhœa has been present (and it generally is) it ceases, or changes from its typhoid character, the patient's mind becomes clear, and he convalesces; but generally slowly, the temperature remaining high, sometimes for weeks, and most likely one or more relapses will take place. On the other hand, cases of Class 2 run on a course more or less nearly resembling ordinary typhoid fever. Surgeon James, of H.M.S. *Téméraire* (to whom I take the liberty of referring), has, I believe, in his possession notes and temperature charts of several cases of Class 1.

The treatment I have adopted in this fever or these fevers has been, for the first week or so, expectant and sustaining afterwards being guided by the symptoms, adopting a course based upon the diagnosis of the nature of the poison present. I am happy to be able to add that up to the present I have been successful.

Wyndham, Cambridge Gulf, Western Australia.

THE FORCEPS IN MIDWIFERY CASES, WITH COILS OF FUNIS AROUND NECK OF FŒTUS; ALSO IN PUERPERAL CONVULSIONS.

By T. OSBORNE-WALKER, M.R.C.S.

QUITE recently I have had under my care four cases of lingering labour, presenting a singular coincidence of symptoms and attendant circumstances, as infrequent, irregular, and inefficient pains, with retrocession of fœtal head on subsidence of pain—the presentation being occipito-anterior vertical in all the cases. Three out of the four I delivered with Sir James Simpson's long forceps and one with Dr. Greenhalgh's short forceps, though I experienced difficulty with the short forceps in consequence of the high position of the head, not having any long forceps with me at the time. Of the four cases the last happened to be the most difficult, as the head of the fœtus receded almost beyond touch of the examining finger after cessation of pain, without introduction of the hand into the vagina; and this occurred to a multiparous woman, who had borne twins in her immediately preceding confinement. Two of the cases were primiparous and two were multiparous, and in all the funes were convoluted tightly around the necks of the children; and both mothers and infants—though two of the latter were greatly asphyxiated at birth, requiring vigorous application of resuscitative means to revive them—have since progressed most satisfactorily. In two cases of puerperal convulsions I have also applied the forceps with marked success, the convulsions ceasing and consciousness returning immediately on delivery of the fœtal head, mothers and infants alike surviving and doing well. In my early practice days I had a case under my care with the cord tightly applied in two convolutions around the child's neck, necessitating its division to safely complete the birth; and in a subsequent case there were not only two tight coils encircling the neck of the fœtus, but both clenched fists were compressing the cord externally, partially overlapping the horizontal ramus of the lower jaw, and a foot interposed, also external to the funis. This state of things I rectified, and the infant, born limp, pale, and apparently lifeless, I was enabled to resuscitate.

Crick.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

CASE ILLUSTRATING THE VALUE OF THE INDUCTION BALANCE FOR DETECTING A NEEDLE IN THE THUMB.

(Under the care of Mr. RICHARD DAVY.)

THE use of the induction balance and telephone, as applied in the case recorded, was undoubtedly of the greatest value in proving the presence and localising the position of the foreign body. The publication of this case will again bring before the profession the value of its use in those obscure injuries in which foreign bodies of a metallic character are lodged, when other definite indication of their presence is absent. For proof of the lodgment of bullets, slugs, &c., at the time of their infliction, the military surgeon has to trust to the evidence obtained by examination of the part, &c., and cannot utilise such a delicate instrument as that described by Mr. Hawksley. In cases, however, where the missile has been lodged for some time and search with the ordinary instruments has failed, it will doubtless be more employed

in the future, and that with success. The notes of the case were taken by Mr. Gordon Green, dresser.

T. D——, aged thirty-seven, late corporal 40th Foot, was admitted into the Mark ward on March 17th, 1887. Ten weeks previously the man was scrubbing a floor, and felt something sharp enter the ball of his right thumb. He went to a hospital, and a surgeon probed the small wound, ordered the man poultices, and kept him under observation for six weeks. He had obscure pain about the ball of the thumb, for which blisters had been applied. Not feeling satisfied, and believing that a needle was yet in his thumb, he came to Westminster Hospital.

When seen, the man's right thumb was painful, and at a small spot in the palm was an eczematous rash, at which point the needle had entered. Surgical examination proved nothing, for no needle or foreign body could be felt on careful manipulation, nor could the patient feel any foreign body, though he had sat long by night and by day trying to settle all doubt as to whether or not any needle was there. Under these circumstances Mr. Davy and Mr. Lownds paid three visits to Mr. Hawksley, on March 18th, 19th, and 22nd, with the patient. Mr. Hawksley not only showed every attention, but favoured Mr. Davy with a report, which is as follows:—

"The apparatus used was essentially the same in principle as that invented by Professor Hughes, and named an 'induction balance.' Its first application for the purpose of detecting a bullet in the human body was that made by Professor Bell in the case of the late President Garfield. There are three uses of this beautiful electrical arrangement: (1) for the detection of the presence of metal in the human body, (2) as an audiometer, and (3) as a means of detecting most minute differences in the mass or alloy of gold or silver coinage. It consists of the following parts: from two to six Leclanché or bichromate elements; a simple microphone, arranged to indicate the ticking of a clock or other source of constant, regular sound; then two double bobbins or pairs of reels of wire, one reel in each pair being of thick wire and forming a primary coil, which is in circuit with the battery and microphone, the other reel in each pair being of fine wire, in the circuit of which is a telephone; the current passing through these latter reels and the telephone is a secondary or induced current, induced by the proximity of the two primary reels. One of the pairs of reels is attached to a box, and is not used for searching. The two reels comprising this double bobbin are held together by elastic bands, but may be separated at will by means of the fine adjustment of three ivory screws. To this latter bobbin is attached the other double reel, or 'searcher,' by means of long conducting cords. This reel is of a convenient size and shape to move about with facility, is made hollow so that prominent parts may be enclosed by it, and, moreover, it may be made of various sizes. Some art as well as technical skill and experience are required to so adjust the fixed coils that the sound of the microphone is not heard in the telephone; but by careful adjustment, absolute silence may be produced, and the two sets of coils or bobbins are then said to be balanced. When this is done the search for a needle or bullet may be commenced by means of the movable coil.

"This instrument need not be used if the presence of the metallic foreign body is evident by the sense of touch or probe explorations; but where these have failed to detect its presence or localise it sufficiently to warrant the surgeon operating, then it is well to use the balance. The evidence it gives is unmistakable, if it be a witness at all, for it simply says metal is or is not in the region examined. It is sufficient, therefore, to know about the neighbourhood where the metallic mass is suspected to lie, and the balance will localise it, often with great precision. The 'searcher,' which the movable reel may be called, is taken in one hand and applied to the surface of the body, the telephone is carefully placed to the ear, and the balance tested for silence. This being found correct, the searcher is slowly moved in parallel lines over the part supposed to contain the metallic body. On detecting the slightest sound in the telephone the searcher is removed and tested for silence. This being found still correct, the searcher is again applied to the body, and, if the silence is again broken, mark the spot through the aperture in the reel. Then begin the search at right angles to the former lines of examination until the silence is again broken, and at the point of maximum disturbance mark the position. A very little manipulation will now enable the searcher to be placed over the spot on the body where the greatest resonance is obtained, and beneath that the metallic object will be found. To define the depth of the metal beneath the surface or its size need not be entered upon here.

"In the case of the needle in question, no indication whatever of its presence was obtained by searching outside the thumb, but on inserting the thumb inside the hollow reel of the searcher, at one particular angle, the pattering sound of the microphone was faintly but unmistakably heard, and the correctness of the indication of the instrument was demonstrated by the result of the operation.

"In a previous case under the care of the late Francis Mason, the patient, an American, had shot himself by placing the muzzle of his revolver into the external orifice of the auditory meatus. Where the bullet was could not be determined; it was searched for by means of the electrical probe of Trouvé, and also the chemical probes of Hawksley On applying for the first time practically the balance test, and after a little searching, a loud sound was heard in front of the patient's ear, though the area of this sound was rather large for a bullet. Nothing else was suspected until the brother of the patient, who was present, inquired if 'gold filling' would interfere with the indications. An examination of the patient's teeth in the upper jaw showed them to be extensively filled with gold, hence the loud sound and its extensive area. From the elementary description of the apparatus which has been given it will be evident that its indications will be very reliable in the hands of an expert; the presence of any other metal in the neighbourhood of the searcher, whether that of a coat-button, a watch-chain, or the ironwork of an ordinary bedstead, must be borne in mind in the endeavour to discover such an inferior electrical body as a common leaden bullet. 'If,' as Professor Bell remarks, 'people would make their bullets of silver, copper, or iron, there would be no difficulty in finding them in any part of the body.'"

The man's suspicion and the surgical opinion being fortified by Mr. Hawksley's examination, Mr. Davy proposed operation to the patient, but not before he had subjected Mr. Hawksley to a crucial test. He showed Mr. Hawksley one needle and a dead hand, informing him that he would place the needle in the hand while he was absent from the room, and then he, by the aid of the searcher, should tell him where it was. During Mr. Hawksley's absence Mr. Davy cut the needle into two and rammed them deeply by means of a pair of tweezers into two fingers. On re-entering, Mr. Hawksley at once spotted correctly the long and ring fingers, and accused Mr. Davy of having used two needles instead of one.

On March 24th, the man being placed under the influence of chloroform, Mr. Davy made a small puncture in the belly of the man's thumb with a tenotomy knife, about midway over the metacarpal bone; using the tenotome as a probe, the needle was, after some searching, felt distinctly. The puncture was enlarged, and the sides of the wound gently retracted; the end of the needle was lifted upwards by tilting, and extracted by an ordinary pair of small pliers. It was the broken point of an ordinary stocking needle, and measured three-quarters of an inch long.

Remarks by Mr. DAVY.—This bit of needle seems to have been lodged between the flexor brevis pollicis and adductor, in some position parallel to the metacarpal bone, and under cover of the bone. This shelter seems to have prevented the patient from experiencing pricking pain. The plan for getting at the needle reminds me of the bet made by oak-rippers that their axe shall hit the same mark on a tree twenty times running. They make their first cut, and then nineteen strokes follow at right angles to the first. So in this case the needle was discovered by using a tenotome (as a probe) at right angles to the suspected track of the needle. In all these doubtful needle cases any diagnostic help is of value; wavering was steadied, suspicion was confirmed, and all were pleased at the valuable assistance rendered in this instance by the induction balance.

NEWCASTLE-ON-TYNE INFIRMARY.

THREE CASES OF COMPOUND FRACTURE OF THE SKULL; TREPHINING; RECOVERY.

(Under the care of Dr. HUME.)

THE following cases, for the notes of which we are indebted to Herbert Bramwell, M.B., C.M., house surgeon, may be of interest to some at a time like the present, when so much attention is being devoted to the surgery of the cranium and its contents.

CASE 1.—W. D——, aged twenty, was admitted on Feb. 24th, 1886, having received a blow over the left eyebrow with a sharp piece of iron, rendering him unconscious for half an hour. Two hours and a half after admission he was conscious, but suffering from shock, with dilated pupils, the left being more so than the right. There was an irregular wound, about an inch in extent, extending from the inner part of the left orbital ridge over the nasal eminence. The orbital margin and adjacent bone were fractured and slightly depressed. On opening the wound free hæmorrhage took place from the divided supra-orbital artery. Considering the small extent to which the bone was depressed, and its relation to the sinuses, it was thought possible that the internal table of the skull might not be injured. Any operation was therefore postponed, and the wound dressed. During the next few hours, after recovering from the shock, the patient vomited several times.

No symptoms developed until Feb. 26th, seven days after the accident, when the following notes were made:—Morning temperature 99·5°; pulse 45, full, with a slow laboured beat. The patient has been very drowsy and lethargic all day, complaining of pain in the head, and is very irritable if disturbed. The pupils are irregular, the left being larger than the right. The wound is suppurating slightly, but is clean and healthy-looking. Evening temperature 100·5°; pulse 40.

March 1st.—The patient has been in much the same condition. The frontal headache still continues.

2nd.—Morning temperature 102°; pulse 48. The lethargy and irritability on being disturbed are more marked. Dr. Hume considered the symptoms indicated inflammatory compression of the brain, and determined to remove the depressed fragment. On exposing the bone, a considerable portion, measuring half an inch in its longest diameter, was found depressed. By removing two small triangular portions of bone from the lower angles, the depressed portion was elevated, when it was found that the inner table had been extensively comminuted. One irregular fragment, the size of a sixpence, was projecting edgeways on to the dura mater. The orbital roof was splintered, several spicules pressing inwards on the membranes. After carefully removing all fragments, the two triangular portions of bone removed by the saw were replaced in position, and the periosteum, which had been carefully preserved, was stitched over them with catgut sutures.

The after-progress of the case was very satisfactory. The general aspect of the patient improved as soon as the effects of the chloroform had passed off; all signs of lethargy and irritable temper soon disappeared. The replanting of the portion of bone was not successful, and delayed the healing of the wound. A small part of one portion formed adhesions, but the other pieces came away as sequestra some weeks afterwards.

CASE 2.—J. S——, aged twelve, was admitted into the infirmary on April 28th, with the following history: About an hour before admission he was hit on the head by the shaft of a cart going at a quick pace, and knocked down insensible. The loss of consciousness lasted only a few minutes.

On arriving at the hospital he walked into the accident room, and seemed little the worse for the injury. On removing the handkerchief which had been applied to the head, a large irregular cut was found on the left side, its centre being situated two inches and a half above the zygoma, and one inch behind the external angular process of the frontal bone. The bone was found extensively comminuted and depressed, and brain substance protruded from between the fragments. The pulse was regular, and beating 72 to the minute. There was no muscular rigidity or paralysis, and he was able to give an accurate account of the accident. After the head had been shaved and thoroughly cleansed, chloroform was administered, and Dr. Hume removed two irregular fragments of bone each about the size of a halfpenny which were depressed on the dura mater and almost completely stripped of periosteum. Several smaller splinters were also removed. During the operation about a drachm of brain substance escaped through a tear in the dura mater, an inch in length, and extending transversely across the wound. This tear in the dura mater corresponded to the position and direction of the transverse frontal fissure. The dura mater was not stitched; a small drainage tube was placed in the lower angle of the wound, and the skin margins drawn together with silkworm gut sutures. The operation was performed under the carbolic spray, and antiseptic treatment pursued throughout the case.

The after-progress of the case was remarkable by the entire absence of symptoms of any kind. The boy recovered rapidly from the effect of the operation, and was quite cheerful next day. There were no signs at any time that the brain had been injured. The wound healed without suppuration, the temperature never reaching 100°. After cicatrisation a space the size of a florin remained, unprotected by bone, through which the cerebral pulsations were communicated to the skin. A flat silver plate has been provided to protect this portion of the brain, and which the patient wears continually without any inconvenience.

CASE 3.—P. M——, aged fifty, a strong, healthy man, was admitted on Jan. 20th, 1887, suffering from a compound comminuted depressed fracture of the frontal bone. The fracture was caused by a blow with the corner of a block of wood, which had been projected with great violence from a circular saw. He was knocked down, but not concussed, and walked the distance of one mile to the infirmary. When admitted he was faint, but had no other symptoms. There was an irregular wound over the right frontal eminence, leading to a large circular depressed fragment of bone, round the margin of which three smaller fragments could be made out.

Two hours after admission, chloroform having been administered, Dr. Hume enlarged the wound by a T-shaped incision, exposing the fractured portion. It was then seen that a portion of the entire thickness of the frontal bone, measuring an inch and a quarter by one inch had been driven inwards and downwards, its lower margin projecting for a quarter of an inch between the dura mater and the bone. Three smaller portions of bone were bent inwards around the lower end of the wound. The whole formed a firmly impacted depressed mass, quite immovable. A small trephine was placed over the upper angle of the wound, and a semicircle of bone removed, exposing the superior angle of the large fragment. By laying hold of this with a pair of sequestrum forceps it was withdrawn in an upward direction. After the removal of this portion the three smaller fragments were elevated with ease, and, being completely detached from the periosteum, were removed. From under the margins of the surrounding bone five small splinters of the inner table were extracted. These were irregular sharp fragments, which would undoubtedly have given rise to meningeal irritation if they had not been discovered and removed. The dura mater was abraded at the upper part of the wound, but not completely torn through. The portions of bone removed, when placed in accurate apposition, measured two inches in their longitudinal, and one inch and a quarter in their transverse, diameter. In stitching up the wound the sutures were made to include the whole thickness of the scalp and whatever portions of periosteum remained. A small drainage tube was inserted at the lower angle of the wound. The carbolic spray was used during the operation, and the wound cleansed with corrosive sublimate lotion.

Recovery took place without a hitch, there being no fever and very little suppuration. The drainage tube was removed on the third day after operation, the stitches on the sixth. The patient was allowed to get up on the tenth day after the operation, the wound being firmly healed; he went home on the thirteenth day after admission. Two months after the operation the cicatrix had contracted to half its former size, and a firm thick covering occupied the site of the fracture.

Remarks by Mr. BRAMWELL.—These cases may be taken as strong recommendations to the immediate removal of depressed bone in compound fractures of the skull. When the operation is performed at once, with complete antiseptic precautions, it will rid the patient of the dangers of septic meningitis, and the surgeon's mind from visions of sharp fragments sticking into the membranes. In any depressed fracture of the cranium one cannot be certain that there are no spicules of the inner table irritating the dura mater; and until this doubt is removed, the surgeon must always be in an anxious state about his patient. Considering, then, the small danger of trephining the skull with antiseptic precautions, the old saying, "When in doubt, operate," would certainly seem the most comfortable to follow.

IT has been decided to establish a Throat and Ear Hospital at Nottingham, and a committee has been appointed to take the necessary steps.

Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

Injury to Cranium at Birth.—Extra-uterine Fœtation.—Urine Reactions.—Abscess of the Uterus opening through the Umbilicus.

AT a meeting of the Obstetrical Section held on May 6th, The President (Dr. MACAN) said he had taken the unusual course of bringing a living child, in care of its mother, for exhibition, the child being a remarkable example of the extent to which an infant's cranium might be injured at its birth without its health being seriously affected. It was a second child. The child was delivered by turning. The woman's pelvis was narrow; and it caused a great depression on the child's head, which had become less since its birth, but was still very marked. The child was slightly asphyxiated after birth, but had been since in perfectly good health, and had given the mother no anxiety. In other cases of narrow pelvis in the hospital the children had been delivered without injury to their crania, but had afterwards died, some of them in an inexplicable manner, within a week.

The PRESIDENT also exhibited a rare case of Extra-uterine Fœtation. The woman had a suspension of the menses for three months, and then was suddenly attacked one day with violent pain in the abdomen, and fell down in a state of collapse. She was put to bed, and remained there for five weeks before she was brought to the Rotunda Hospital. When she arrived there she was in great pain. He found a tumour extending up to the umbilicus. She gave a positive history of pregnancy, and on squeezing her breast a considerable quantity of fluid came out. After she had been for some time in the hospital he thought the posterior cul-de-sac more indicative of fluid than it had been, and determined to aspirate. He did so, and the first syringeful of blood that came away was quite black, but the next was so bright that he withdrew the needle at once. Symptoms of increasing collapse ensued, and after nine days she died. Dr. M'Kee made the post-mortem examination. On cutting through the uterus, a large blood clot was found in the posterior cul-de-sac. The fœtus was found in the abdomen. There was also a fibrous tumour. The sac in which the fœtus must have been was recognisable, but the condition of the clot and tumour was such that the place in which the fœtus had developed could not be determined.

Dr. R. H. FLEMING showed the Decidua removed from the cervix of a patient shortly before death, who was suffering from profuse internal hæmorrhage, the result of a ruptured extra-uterine pregnancy, probably tubal.

Dr. ALFRED SMITH exhibited specimens of Urine Reactions. The urine had been taken from a woman who had suffered from puerperal convulsions. Four days before the attack she had great pain in the abdomen with frontal headache, and the convulsions were started with epigastric pain and great depression about the chest, and small and rapid pulse. The reactions were divided into four groups, representing urine drawn off at different times—viz., the first at 6 P.M. on April 30th, shortly after the woman was admitted into the Rotunda Hospital; the second at 2 P.M. on May 1st; the third at 10.30 P.M. on the same day; and the fourth at 6.30 P.M. on May 6th. Specimen *A* of the first group showed a half bulk of albumen; *B* a heavy peptone reaction; and *C* well-marked acetone. Specimen *A* of the second group showed albumen one-half by bulk; *B* heavy peptone reaction; and *B* acetone. Specimen *A* of the third group showed one-eighth of albumen by bulk; in specimen *B* peptone was absent; and in specimen *C* acetone was absent. In the fourth group Specimen *A* showed a tenth of albumen by bulk; in specimen *B* peptone was absent; and in Specimen *C* acetone was absent. The testing of the urine took place after the convulsions. The quantity of it was perfectly normal before she came in.

Dr. J. R. FITZPATRICK related the case of an Abscess of the Uterus, opening through the Umbilicus, in which an abdominal tumour appeared three weeks after delivery, in shape and size corresponding to the uterus at the seventh month of pregnancy. The tumour reached from the pubes to an inch above the umbilicus, became adherent to the abdominal walls, and after four weeks an abscess discharged through the umbilicus. The matter discharged was thick and putty-like, in large quantities, and very fetid for some days. There was not much pain, but very rapid pulse, and varying temperature, running up at night to 103° and 104°. A drainage tube was passed in at the umbilicus, and for several days the abscess cavity was irrigated with a solution of boracic acid, in hot water (1 in 40). The feverish symptoms subsided after some days, the discharge ceased, the tumour diminished in size, and the patient made a good and perfect recovery. A similar case is described by the late Professor Schroeder, in vol. x., p. 99, of "Ziemssen's Cyclopædia of the Practice of Medicine." — Professor BENNETT said that as it devolved on him to have a large part in the active treatment of this case, he desired to make a few observations. The pelvis was flat at the sides, back, and vagina, and was quite free. The only feature that pointed to the uterine character of the affection was the upward elongation of the uterus. The opening was near the summit of the tumour and was extremely small; and, in the absence of precedent, the question was whether, as the symptoms were urgent, it would be wiser to dilate the opening with a knife, or to adopt the slower method of gradual dilatation, as he was apprehensive that there might be adhesions along the point of exit. A remarkable symptom was that whenever the tumour was compressed, the woman felt a desire to urinate. The path of the opening was along the urachus, and, as he felt some delicacy in using the knife there, he adopted the slower course of dilatation. Spots of pyæmia appeared, and he was inclined to lay the tumour open, but did not do so for fear of infecting the abdominal cavity. The abscess originated subsequently to labour, and had a duration of between three and four months. A remarkable feature in connexion with it, which he never saw in any other abscess, was that the contents were reduced to such a condition of solidity that a great force of irrigation had to be employed in order to dislodge them. The whole tumour was full of material which was firmer a great deal than butter. Such rapid degeneration of pus he had never seen in so short a period as between three and four months. The material consisted of nothing but a mixture of detritus of pus and oil. The question of its size was a difficult one to decide. It was not in the uterine cavity, because there never was any discharge whatever of pus from it; and he believed that it must have been situated in the sub-peritoneal tissue of the upper part of the body of the uterus. It was the only example of the kind he had ever seen. At one period of the case he thought that there was a suppurating ovarian cyst which had become adherent; and he also thought that it might be a case of extra-uterine fœtation, and that they would come on the débris of the fœtus. Whether he was right or wrong in the course he took of slow dilatation, the result of the case had been successful. The rapid restoration to health of the woman, the moment the contents of the abscess were entirely cleared away, showed that the case was neither one of an ovarian tumour which had suppurated nor one of extra-uterine fœtation in which the fœtus had decomposed. The only difficulty was the removal of the putty-like material which the abscess contained. As he had said, he feared to make a free opening in the abdomen, not knowing the limitations of the canal through which the pointing took place, and, as irrigation was adopted, it was necessary to employ a free stream, and the only question was what antiseptic should be used. They could not use three or four pints of mercuric, iodoform, or carbolic solution; the only antiseptic that could be employed in the necessary quantity was boracic acid, and that solution proved most efficient.

Lumbo- and Laparo-colotomy.

At a meeting of the Surgical Section, held on May 20th, Mr. THOMSON read a record of two cases of Colotomy. In the first, which the patient survived twenty-one months, a tube about the size of small intestine was found in the position of the colon, and between that viscus and the kidney. He was assisted by the late Professor M'Dowel and Professor Thornley Stoker, neither of whom could recognise it. The latter thought it might be an enlarged ureter, but on puncturing it with an angular needle two or three times nothing escaped. The tube was left *in situ* and the colon was opened. The patient made a good recovery. In a drawing of a frozen transverse section he showed how, if the colon had a long mesentery and was distended by flatus, it could extend forwards past the jejunum, lying on

its outer side, and, overlapping that portion of the intestine, appear second in order from the quadratus lumborum, and not first. In the second case, fæces did not appear for seventeen days. The patient was aged seventy-one, and, although the wound was entirely healed, he died on the twenty-third day after operation. Both operations were done for cancer of the rectum.

Dr. BALL read a paper on Colotomy, illustrated by five cases, in three of which the lumbar operation was selected, while in two laparo-colotomy was performed. He advocated the adoption of the latter operation in the adult as well as the child.—Mr. TOBIN, while confident of a consensus of opinion in favour of early operation, was equally sure that the cry could be carried too far, and that there were "too soon" operations as well as "too late." When there was malignant stricture of the rectum, inflammation might be remedied by palliative treatment, and when it subsided the bowel would carry on its work. He had had a case in point—one of stricture of the rectum—that almost occluded the bowels. Having tried palliative treatment and given enemata, he found the bowel could carry on its work fairly well. He taught the patient to use Higginson's syringe. Subsequently the patient was admitted into the Hospital for Incurables, yet in a condition to go to a garden party when he had the opportunity. Therefore that a surgeon could not operate too early was not to be taken as a rule.—Dr. CHANCE observed that his colleague, Dr. Coppinger, in order to identify the intestine, passes through the stricture a very small catheter, and then a stilette through it.

Reviews and Notices of Books.

A Practical Treatise on Diseases of the Eye. By Dr. EDOUARD MEYER, Prof. à l'Ecole Pratique de Médecine de Paris, &c. Translated by FREELAND FERGUS, M.B., Ophthalmic Surgeon to the Glasgow Royal Infirmary. London: Charles Griffin and Co. 1887.

CONSIDERABLE courage is now demanded of anyone who will undertake to write single-handed a complete treatise on the diseases of the eye. In Germany, the vast collection of independent treatises which have been collected by v. Graefe and Saemisch in the "Handbuch" supply evidence of the wide extent of the ophthalmological knowledge of the present day, and of the depth to which it has been carried by many earnest workers. In France, both De Wecker and Galezowski, though masters of the craft, have found it expedient to avail themselves, in the compilation of their larger treatises, of the services of younger men; whilst Sichel appears to have been unable to get beyond his first volume. The work before us, which has been excellently translated by Dr. Freeland Fergus of Glasgow, is not quite a new work, but it is greatly enlarged as compared with former editions, and has been almost rewritten. It has certainly been well brought up to the knowledge of the present day, and may be regarded as in all respects a very trustworthy guide for the practitioner, who, whilst possessing a fair knowledge of eye diseases, is yet unable to avail himself of the services of an ophthalmic surgeon. The volume has been very well got up by Messrs. Griffin, and the type, woodcuts, and chromolithographs are alike excellent.

The mode in which Professor Meyer deals with each subject is thoroughly practical; a short anatomical introduction precedes the description of each part of the organ, as of the cornea, iris, and retina, but no attempt is made to treat these subjects exhaustively. They are only described so far as may be requisite to render the nature of the pathological processes intelligible.

We venture to notice a few subjects which have attracted our attention in looking through the work. In speaking of the treatment of purulent conjunctivitis, Professor Meyer recommends cold compresses in the early stages, with scarification of the mucous membrane and division of the external canthus, and thinks that astringents and caustics should be avoided. We do not think that scarification is often practised in England, nor is the external canthus frequently, though it may be occasionally, divided. With us the sac of the conjunctiva is generally sedulously washed out with boracic acid or some other antiseptic; and lead lotion, which is here recommended, is rarely employed, lest a white deposit should occur on the cornea. Professor Meyer is opposed to the abortive method in the earliest stages, but when the purulent nature of this disease is clear, caustics in the form of a strong solution of lapis divinus, acetate of lead, or silver nitrate may be employed, the latter being used preferably in the form of mitigated nitrate. This method has not in our hands proved very satisfactory, and we are inclined to rely a little more on general treatment, such as quinine and iron.

Of Sympathetic Ophthalmia, with the symptoms of which every practitioner should be familiar on account of the serious issues in which it may terminate, Dr. Meyer recognises four forms: sympathetic irido-choroiditis, which very frequently ends in complete blindness; sympathetic serous iritis, which is much less dangerous; sympathetic chorio-retinitis, which has hitherto only been observed by v. Graefe; and sympathetic neurosis, which is characterised by the absence of any material change in the structure of the eye. Dr. Meyer points out that the means of transmission of the irritation may be along the ciliary nerves, along the optic nerve, and along the vessels; whilst the presence of micrococci in the intra-vaginal space after the injection of microbes proves that sympathetic ophthalmia may be of an infectious nature. In regard to treatment, he recommends the removal of the injured eyeball as the only certain means of preventing the development of sympathetic ophthalmia; other proceedings being section of the anterior ciliary nerves behind the point of tenderness, or section of all the ciliary nerves behind the globe, either with or without section of the optic nerve. We think the author might have expanded this chapter with great advantage. Imagine a case occurring to a country practitioner in which a child has received a cut with a knife in the ciliary region. What shall he do? If he refers to the work before us, he obtains little information. The excision of the eye seems to be the only course open to him, if he wishes to place the child in absolute security; but the child may see very well, and parents or friends may object to such extreme measures, and we think with justice. The nature of the wound is of some consequence in determining the question. A stab with a fork, as in attempting to open the knot of a bootlace, is much more dangerous than a cut with a piece of glass. The temperament of the child is an element in the prognosis. Enucleation should be practised on an irritable child, whilst it might safely be postponed in one of placid disposition. Nothing is said of the propriety of pad and bandage applied to *both* eyes, and perfect rest in the dark for a week or ten days, by which means dangerous consequences may often be averted, and so on. The question of the removal of an eye is a very serious one, and the surgeon is not unfrequently placed in a dilemma. If he leaves it alone and sympathetic ophthalmia supervene, he is blamed for the result and for his non-interference; if he removes the eye immediately, he is blamed for acting precipitately, and for being only too anxious to operate.

We have noticed a few slips which, in view of a second edition to which the work will assuredly run, may prove of service to the translator. Page 57, line 15, "chymotic" should be "chemotic"; page 189, "Streatfield" should be "Streatfeild"; page 22, "The disease has till now been rarely observed," should be "The disease up to the present time"; page 237, "Fentana" should be "Fontana"; page 320, line 15, after "sooner" the words "or later" require to be inserted; page 391, line 18, instead of "a lens made of a convex sphere," read "a convex lens made from a sphere"; page 401, line 8 from bottom, for "preserves" read "preservers"; page 402, line 16, "Prismatic glasses are also used in *ophthalmology*," should be "in ophthalmic surgery" or "in ocular therapeutics"; looking to the derivation of the term, they can hardly be said to be used in "ophthalmology." Some proceedings are described rather fully that have fallen into entire disuse and are not likely to be again practised.

A very high tribute of praise must be given to Dr. Freeland Fergus for the general character of the translation, which is extremely readable and at the same time very accurate. The work may, as a whole, be regarded as a faithful epitome of the present state of ophthalmological science, and may be fully relied upon as an index of treatment for ordinary affections of the eye.

The Climatic Treatment of Consumption. By JAMES ALEX. LINDSAY, M.A., M.D. London: Macmillan and Co. 1887.

THIS book is one which is not only eminently readable and suggestive, but clear and concise, and is evidently the outcome of an extended personal experience. The writer, who has visited most of the health resorts of the world, is enabled to bring to bear upon his subject information which, coming first hand, is of the highest value, whilst he has evidently studied the question of medical climatology with great care. The chapter devoted to the mountain sanatoria has in great part appeared in our columns, when it attracted attention from the manifest grasp that the writer had of the facts for and against these now highly fashionable resorts. Dr. Lindsay displays the same judgment and discretion in dealing with ocean travel, whilst the chapter on Australia abounds in facts that will be gladly welcomed in this country. He distinguishes between the characters of the littoral region, the highland region, and the region of the inland plains, the last named alone being the most suitable for invalids—to those, at any rate who can adapt themselves to the mode of life; but he proves clearly that in the large towns on the littoral, especially if the patient continue the sedentary vocations of his home life, the benefit he will derive may be *nil*. Very significant are the details of mortality from consumption in Melbourne and rural Victoria in this respect. In the city it amounts to 2·5 per 1000; in the country to only 0·87 per 1000; so that the rate at Melbourne is as high as in rural England, and not much below that of London (3·2 per 1000). The climatological characters of Tasmania (where the Australian invalids resort in summer to escape the hot winds of that season) are next described. This island is "one of the most picturesque little spots in the world," contrasting strikingly with "its great and prosperous, but uncomely neighbour." The northern and eastern coasts seem to be the most equable. The death-rate of the island is about 15 per 1000, whilst the mortality from consumption is but little over one-third of the British rate, and the quietude of the place renders it peculiarly suitable for invalids; but as its climate is more damp than Australia, and changes of temperature are frequent, it is not considered suitable for the permanent residence of the consumptive. In New Zealand, where there is great prevalence of wind, and a very considerable rainfall, the death-rate from consumption is rising steadily, and it is not to be preferred as a residence for the consumptive to the Riverina of New South Wales, or the Darling Downs of Queensland. Dr. Lindsay wisely points out the undesirability of this remarkable country for the invalid, however attractive for the tourist. A short chapter on Southern California serves to indicate the dryness and warmth, with absence of wind, which point to its utilisation as a health resort, although it is not much developed. The Cape, objectionable on the coasts from the prevalence of winds, is barred to the delicate invalid from the discomfort of travel and accommodation in the interior, where the climate is most suitable. Algeria is described as the favourite among the new health resorts for the consumptive, but the author speaks with hesitation, from the existence of such drawbacks as an imperfect water supply and the presence of much dust. He considers, however, that the idea that Hamman R'Ihra is unsuitable for a winter residence is overrated. But little, in fact too little, space is allotted to the description of the health resorts of Southern France and of the home country, and it would be well if in a future edition the author were to expand these subjects. It would add greatly to the utility of the book. Some mention should also be made of Madeira and Oratava, and of Egypt. Of especial value is the chapter upon the choice of a climate for the consumptive; for we may fairly say that no question is more difficult for the physician to decide, or one which entails so much responsibility. As an aid towards enabling him to arrive at a right decision this book is sure to prove of service, and we have little doubt that it will be widely read and appreciated. The subject is one, too, which engages the attention of patients as well as doctors; and it is highly important that it should be discussed without prejudice and in a scientific spirit. Dr. Lindsay has certainly succeeded in fulfilling these requirements, and we may be contented to have drawn attention to a work which will do much towards placing on a sounder basis the appreciation of the relative merits of health resorts.

Scheme of Case Reporting. Arranged by W. H. ALLCHIN, M.B., F.R.C.P. London: H. K. Lewis. 1887.

Notes on the Physical Diagnosis of Lung Diseases. By J. MAGEE FINNY, M.D. London: H. K. Lewis. Dublin: Fannin and Co. 1887.

DR. ALLCHIN'S scheme has at least one distinctive merit. It is by far more detailed than any similar work with which we are acquainted. To some this may seem to be a questionable advantage, as tending to confuse the student in his bedside examination; but Dr. Allchin has anticipated such criticism, and we are inclined to agree with him that nothing ought to stand in the way of obtaining a complete clinical record of a case. A few cases worked out thoroughly upon the lines laid down in the Scheme would be a most useful educational exercise. It is, however, as a complete guide or reference that the Scheme will probably be most utilised by house-physicians and clinical clerks; and it is produced at a price which will bring it within the reach of all. We have carefully gone through its pages, and can safely say that there is not a point in the clinical history and examination of a medical case that has been omitted.

Dr. Magee Finny's little book, based upon the instruction given in his class, simply aims at recording the methods of physical examination of the chest and the nomenclature of physical signs, with their significance. The author's reputation is sufficient proof of its accuracy, and its size is conveniently portable.

Dermatitis Venenata: an Account of the Action of External Irritants upon the Skin. By JAMES C. WHITE, M.D., Professor of Dermatology, Harvard University; Physician to the Out-patient Department for Skin Diseases, Massachusetts General Hospital. Boston: Cupples and Hard. 1887.

THE title "Dermatitis Venenata" is applied to those forms of inflammation of the skin which are produced by the direct action of irritating agencies externally applied, and in this treatise Professor White has collected much reliable information on the subject, which has not been hitherto accessible to the practitioner in a convenient form. The bulk of the work is taken up by a consideration of the action of plants on the skin; then follows an account of other irritants, organic and inorganic; and lastly, the author treats briefly of animal irritants. The nature of these irritating agents, and the conditions under which they come in contact with the skin, are most varied. They excite inflammatory processes of all degrees of intensity, characterised by certain primary efflorescences, such as the hyperæmic macule, a wheal, a papule, vesicle, bulla, or pustule, and by such secondary lesions as scaling, excoriation, scabbing, ulceration, scars, and pigmentation, and these lesions are indistinguishable from such inflammatory lesions as eczema, erythema, and urticaria excited by internal agencies.

The botanical tastes of Professor White have made this work an agreeable labour, and it is throughout written in a scholarly manner. The treatise will be useful, and we cordially recommend it to the profession.

THE LANCET.

LONDON: SATURDAY, JULY 30, 1887.

THE consideration of the Estimates in the House of Commons on the 22nd inst. gave opportunity for objections to be raised to that part of the vote which related to vaccination administration in England and Wales. Usually the opposition is limited to the few anti-vaccinationists who become members of Parliament, but their number was on the present occasion strengthened by the Irish members, who, following Mr. ARTHUR O'CONNOR, objected to this item, on the ground that it was a special and exceptional allowance limited to England and Wales alone. Mr. O'CONNOR was supported by Dr. GAVIN BROWN CLARK, who gave as the ground of his opposition that Scotch medical men did not receive any portion of this grant for vaccination. Mr. RITCHIE, however, explained that the Act of 1867, under which awards to public vaccinators are made, was limited in its application to England, and that if its provisions had extended to Scotland, that part of the kingdom would receive a share of less than £100. In regard to Ireland, he observed that the vaccinating officer was also the dispensary officer, who was partly paid from Imperial funds, and that altogether Ireland was at no disadvantage. The combination of members who for these various reasons opposed the vote numbered only sixty-six.

The arguments raised against the operation of vaccination were of the same sort as those to which the House has each year to listen when the subject comes under discussion, the same stock statements were made as to the injuries which follow from the enforcement of the Vaccination Acts. As an illustration of the reasons given for Parliamentary inquiry into the working of the Acts may be mentioned the statement of Dr. CLARK that he had himself "vaccinated from children suffering from syphilis; he could not help it, because he did not know the antecedents of the child from whom the lymph was taken."

Mr. RITCHIE, in an able reply, expressed his doubt as to whether the opposition to compulsory vaccination was really increasing; but if it were, he said, he should not feel in the least astonished, because the gross misrepresentations by anti-vaccinationists as to the effect of vaccination, which were constantly placed before the people, and especially the working classes, in our large towns, could fully account for any growth of opposition to the law. He pointed out the great saving of life that had been effected by vaccination, and claimed for the Local Government Board that every case of alleged injury was investigated and the facts concerning it fully stated. The Board, indeed, deserve much credit for the full accounts of the working of the Vaccination Acts that are given each year in the reports of their medical officer, and which show that only some 5 per cent. of children in this country escape the operation of the Acts. It is true that in some few localities the proportion of children who are left unprotected against small-pox is much greater than this; but these places are essentially those in which the inhabitants are deceived by the misrepresentations referred to by Mr. RITCHIE, and it may safely be asserted that for the rest of the kingdom no widespread opposition to vaccination exists.

The proposal of Dr. CAMERON, that the use of calf lymph should be more largely extended, is a point upon which we have frequently expressed our views. The work of the Animal Vaccine Establishment has certainly shown that excellent results attend the direct vaccination of children at that institution. If calf lymph, however, were to replace humanised lymph throughout the whole country, it would necessitate the use of stored lymph, and the more certain arm-to-arm vaccination would have to give way to vaccination having a less assured success. No sufficient reason has ever been shown for thus changing a system which has practically banished small-pox from many parts of the country, and has greatly reduced its prevalence in others; nor do we believe that the opposition to vaccination which is now carried on by a few misled enthusiasts would be overcome by any such alteration of method as that which Dr. CAMERON proposes. The silence which the anti-vaccinationists have hitherto observed with regard to the use of animal lymph would at once be broken if the current vaccination of the country required its universal employment.

The supporters of vaccination have no grounds for fearing the result of any inquiry as to the value of the operation which might be instituted, but it has to be remembered that the mere fact of such an inquiry being held would itself be regarded by the ignorant as casting doubt upon the efficacy of this means of preventing small-pox, and would afford direct encouragement to the opponents of vaccination to persevere in efforts which have already in certain places been attended by an unfortunate success. It is possible for the Vaccination Acts to fall into abeyance in Leicester and some other towns without immediate calamity following from this negligence, but as the populations gradually revert to a state of susceptibility to small-pox, it is certain that in the future a terrible mortality will result, and the mouths of anti-vaccinationists will be for a time silenced. It is lamentable that such experience is needed for those communities which persistently refuse to learn the lessons taught by the past.

AT the present time, when corrosive sublimate has established its claim to the title of being the most powerful and the most efficacious of all known antiseptics, and has therefore passed into general use, but has, on the other hand, caused many untoward accidents, the experimental work of DOLÉRIS and BUTTE[1] is opportune and valuable. These observers, desiring to elucidate the causes of mercurialism, especially in obstetric medicine, compared the effects of vaginal and other injections in animals (dogs, rabbits, and guinea-pigs) when the mucous membrane was (*a*) intact, (*b*) wounded. The strength of the sublimate solution was 1 in 1000.

(*a*) Experiments when the mucous membrane was intact gave the following results. In dogs, the first vaginal injection of one litre of the solution was generally followed

[1] Nouvelles Arch. d'Obstétrique et de Gynécologie, No. 12, Dec. 25th, 1886, p. 739.

the next night by simple yellowish or by blood-stained diarrhœa, and often by the vomiting of food. This affection was, however, transient, and lasted only a few hours, the animals rapidly recovering on the second day. The temperature was not affected. However long the injections were continued, to the amount of two or three litres daily, no further effect was produced. This acquired immunity seemed to be due to alteration in the vaginal mucous membrane, which was noticed to become dry, hard, and thickened, and presumably non-absorbent.

(*b*) As regards sublimate injections after injuries to the mucous membrane, the results varied with the nature of the wounds. If these were slight, the effects might amount to slight diarrhœa, but generally there were no results at all. To produce fatal results it was necessary to produce extensive and saccular wounds, allowing the fluid to stagnate, or to continue the injection for a long time. These experiments were made on rabbits, guinea-pigs, and dogs.

The rodents seemed very easily poisoned by the sublimate; in some cases death occurred within twenty-four hours, and no marked pathological lesions could be observed. In most cases death occurred at between two and three and a half days (forty-eight to eighty-four hours), and with marked changes in the large intestine and kidneys. The temperature gradually sank and became subnormal (33° C.), and the animals became rapidly weaker and unable to stand. The urine appeared to be diminished; it became slightly albuminous after the second day; it reduced the cupro-potassic test, forming a dark yellow liquid, but not the precipitate characteristic of sugar. This reaction may have given rise to the assertion of diabetes as a result of mercurialism, and a similar reaction is recorded by one of the authors in a patient under mercurial treatment.

The post-mortem appearances are practically as follows. The cæcum and colon show submucous hæmorrhages with sloughs of the mucous membrane in places. The kidneys are somewhat enlarged, and in a condition of acute parenchymatous nephritis; their surface is pale, and shows some white dots. On section the cortex is pale and almost entirely composed of yellowish-white streaks, which are straight tubules full of calcareous deposits, which, when treated with sulphuric acid, show crystals of sulphate of calcium. The medulla is congested, the pyramids are reddened, and contrast markedly with the pale cortex.

Dogs seem less sensitive than rodents to sublimate intoxication. Sometimes they do not die at all, sometimes after four or five days. The temperature does not sink till towards the fatal termination. Diarrhœa, with tenesmus and blood-stained stools and vomiting, always begins the night after the sublimate injection, and continues throughout. The first few days dogs do not seem very ill, but towards the end they lose flesh and strength, remain recumbent, and fall on trying to rise. In one case death was preceded by convulsions, with subnormal temperature. Perhaps the convulsions were uræmic. The urine is always albuminous, and gives a yellow colour with the cupro-potassic test. There is no change in the hæmoglobin of the blood, its power of absorbing oxygen not being diminished. Death follows in from four to twelve days, and, as in rodents, the earlier the more sublimate is used. The causes of death appear to be principally the renal changes; the quantity of urea in the blood increases considerably in the last days of life. As a rule there is no salivation. In cases rapidly fatal the liver and pancreas are sometimes congested; this congestion is not observed when death ensues slowly. The other appearances are the same as in rodents, with the following differences: no ulceration of the bowels is found, and no calcareous deposits in the renal tubules, which are filled with renal epithelium in a state of fatty degeneration.

The practical conclusions point to the caution necessary to be observed in the use of sublimate after delivery, on account of the surgical injuries present. The temperature is oftener raised in women than in animals, probably on account of the greater intensity of intestinal lesions, and the peculiarity of the placental site in women favouring sepsis. Rise of temperature is, therefore, at best, only an indirect sign of mercurialism, while depression of temperature, especially if gradual, points directly to it. The daily examination of the urine will show early albuminuria and the yellow colouration above mentioned; that of the blood will show the accumulation of urea. The presence of mercurialism does not prevent septicæmia. These experiments, which of course require confirmation from clinical observations on women, are meanwhile of great importance.

THE inadequacy of medical incomes is not a pleasant subject, but it is not one which can properly be ignored; on every ground it is one that should be explored and demonstrated. The duties of the medical profession are not such as can be adequately discharged by men whose living is precarious or whose remuneration is mean. This is not an original remark, but was made more than a hundred years ago by so sound a writer as Dr. ADAM SMITH. One or two of his sentences are worth reproducing:—

"We trust our health to the physician; our fortune, and sometimes our life and reputation, to the lawyer and attorney. Such confidence could not safely be reposed in people of a very mean or low condition. Their reward must be such, therefore, as may give them that rank in society which so important a trust requires. The long time and the great expense which must be laid out in their education, when combined with this circumstance, necessarily enhance still further the price of their labour."

It may be said that SMITH had in view exclusively the case of highly cultivated physicians who moved and practised among the rich; but this is not so. He applied the same principle *mutatis mutandis* to the general practitioner, or, to use the language of his day, the apothecary.

"The skill of an apothecary is a much nicer and more delicate matter than that of any artificer whatever, and the trust which is reposed in him is of much greater importance. He is the physician of the poor in all cases, and of the rich when the distress or danger is not very great. His reward, therefore, ought to be suitable to his skill and his trust."

We cannot give space for the whole interesting paragraph, in which this great authority shows that the apparently large profits on mere drugs are really a reasonable reward for labour and skill.

There is too much reason to think that these elementary principles are forgotten by many, not of the poorer classes alone, who would reduce medical remuneration to a degrading pittance, that neither recognises actual outlay nor

sustains the dignity of a liberal profession. Let us take the case of an accoucheur. Are we to rate his value at the cost of the timely dose of ergot which he administers? Such a question has only to be stated to carry its own refutation. Clearly the remuneration of his services should be such as to cover the outlay on his past education, and to stimulate him and enable him to regard his life as a continuous piece of high educational work, and his profession as the most responsible which a human being can undertake—more responsible and important in the case of him who practises among the poor than of him who attends the rich, for the simple reason that the rich can multiply their advisers, whereas the poor have to be content with one or with few.

On the delicate question as to whether medical incomes are improving or becoming worse we shall not say much. The letters of Dr. THURSTAN on that subject are not easily to be disproved, in which he reduces the average income of medical men in actual family practice, after deducting working expenses, interest on money spent on education, &c., to little more than £350 a year. The inadequacy of this income is further shown by the scanty savings of medical men, and the slight reserves for a "rainy day" which they are enabled to put by. It is impossible that medical men should not suffer in common with others in a time of general depression, such as we are passing through. But Dr. THURSTAN'S complaint goes much further than this, and implies a want of public recognition of the value of medical services. He blames errors of administration in public medical charities, which tend to break down the sense of honest independence among the farmers, tradesmen, and working people, and which infect these classes with a low sense of the value of medical services. "A Hospital Surgeon" in a very able letter in our columns, in reply to Dr. THURSTAN, vindicated young consultants, and described graphically the anxious years of strained hope and patience which they had to pass through before attaining to assured comfort, to say nothing of independence. "An Old Oxonian" did not seriously question Dr. THURSTAN'S facts. He properly complains that old and eminent men should be tenacious of humble appointments, instancing a hospital surgeon who to near his death held many clubs. He admitted that from his neighbourhood several rich people, *far better off than local doctors*, had gone as in-patients to London hospitals. It is, as he indicated, a grievous evil when eminent hospital surgeons admit patients to be treated by them as gratuitous patients who cannot pay their fees, but who can easily pay the fees of highly capable men who have not yet attained that degree of fame which implies the power to command large fees. If young consultants were thus considered a little more by their seniors, they would find an earlier reward of their ardour and study, and would be less open to the temptation to compete with general practitioners. Be this as it may, it is a monstrous thing that well-to-do people should be treated gratuitously in hospitals simply because they cannot pay the very highest fees of operating surgeons. After all, the maintenance of a proper standard of fees and of the dignity of the profession rests chiefly with members of the profession itself, rather than with its Corporations or the Medical Council. The power of the latter, in this regard, is extremely limited. The Corporations have still ethical powers which they do not sufficiently use, and which they should be pressed to employ more frequently when their members forget the obligations of a learned and liberal profession. But, after all, it is to individual members of the profession that we must look—to the older members for a little more consideration for the younger, and to the younger for more regard to the traditions of professional honour and for maintaining the traditional fees, *plus* something that will represent the larger wealth of the public and the larger wants of medical men. Competition is inevitable. With six or seven hundred more entering the profession yearly than are needed to fill natural vacancies, there must be competition. But let it be the competition of those whose wants are modest, and who see in true professional ways the only sure path to lasting success and credit. Even in competition for appointments in which the poor are concerned, nothing is more important than to hold high the value of medical services. The working classes need instruction on this point. It is of more moment to them than to their richer neighbours to have one good medical man, and to retain him by generous treatment.

THE subject of the holidays occupies the minds of a large portion of the inhabitants of this country at present. Boys and girls are looking forward to a delightful cessation from work; more or less anxious parents are forming plans for the amusement and gratification of their children. The cry of "What shall we do with them in the holidays?" is not heard so constantly in the summer as in the winter, since if the weather is at all propitious amusements are comparatively easily obtained, and the young people return to school looking as well as or better than when they left it. Not so, unhappily, in the Christmas vacation, when parties, sight-seeing, and sometimes want of exercise, send them back to school decidedly the worse for their holiday. Crowds of school-boys and school-girls will be congregating at the seaside during the ensuing months. The question naturally arises how best to employ this time to the benefit not only of their bodies, but also of their minds. The fashion of mixing up lessons and holidays is an undesirable one. Let our children work while they work and play while they play; only it is sometimes necessary to teach them how to play. Of course allusion is not made here to cricket, tennis boating or fishing; but many a boy even with these amusements will give utterance to the complaint some part of the day, "There's nothing to do." A listless mind is good neither morally nor physically, and a remedy for it might be found to lie in cultivating the habit of observation. The seaside would present a far wider field of amusement if parents would endeavour to interest their children in the natural objects round them. Of course this presupposes a degree of intelligence not always found, and even where it is present the habit of indolence too often intervenes. It is a common belief that the mere fact of holidays ought to be all-sufficing to the rising generation, but the active minds and bodies of our boys and girls require constant occupation, and also a change of occupation. In cultivating the love of natural objects, the knowledge of the habits of birds, fishes, butterflies, either at the seaside or in the country, a great stride is made towards dissipating the ennui which sooner or later may attack the young holiday makers. It seems strange that our seaside towns are not more alive to this fact, and

that, except in rare cases, no attempt is made by the local authorities to exhibit the manner of life and the habits of fishes and other occupants of the sea. Why should there not be in every such town an institution with an aquarium and a good collection of butterflies, flowers, and other natural objects to be found in the neighbourhood? Our boys would often enter with pleasure into a search if they only knew what to look for. The very pebbles of the beach might be made to furnish amusement if the different kinds were exhibited and catalogued in their rough and in their polished state, especially if facilities for cheap cutting were afforded. Few things are of greater value in many professions than a keen observant faculty, and in most cases it is the result of careful training on the part of parents and schoolmasters, or at a later period of the individual himself. Take, for instance, the medical profession: how much success many a man owes to his keen powers of observation, which materially aid him in diagnosis and treatment. If our boys were taught to use their eyes in connexion with common natural objects, the probable result would be an extended power in other departments. Even more marked benefit is to be looked for in the summer holidays for our girls than for our boys. Boys have their games all the year round at school, but the less fortunate school-girl is restricted to the holidays for the full and complete enjoyment of the use of her limbs. She may, it is true, be able to play tennis during the warmer months, but even then it is by no means the serious business which cricket and football are to a boy. The holidays are necessary for the physical development of our girls. Let them bathe, swim, row, run, and even play cricket as much as possible, without incurring the odium of being "unladylike" or "hoydenish." Young girls and growing girls would make better and healthier women if the holiday time were to them a season of complete open air life, with a sufficiency of active but not too arduous physical exercise.

Annotations.

"Ne quid nimis."

A NEW TEACHING UNIVERSITY FOR LONDON.

THE terms of the draft Charter for a new University, to be named the Albert University of London, and designed to include a district of fifteen miles' radius from Somerset House, have been agreed upon and adopted by the Councils of University and King's Colleges, and will accordingly be submitted to the Privy Council in a few days. The Charter is in its essential features similar to that of the Victoria University.

THE HOSPITAL SUNDAY FUND.

THE Report of the Distribution Committee, adopted on Monday by the Council of the Hospital Sunday Fund for the current year, shows that the total amount available for distribution, after allowing sufficiently for liabilities and the usual current expenses, is £39,125. It will be remembered that the result of the collection last year was a total of £40,300. Of course we could have wished that this Jubilee year had had, in addition to all its glories, the distinction of a huge hospital collection that would reduce, if not extinguish, all the adverse balances of our hospital finances. And that may still be the case. We may not yet have seen the full development of Jubilee liberality. Meanwhile the Hospital Sunday collection of the present year approaches within a few hundred pounds that of last year—the largest result which had been realised since the establishment of the Fund. As far as the collection is concerned, the Jubilee evidently cut two ways. It multiplied the demands made on public generosity in a great variety of directions, and by so much created schemes which competed with the Hospital Sunday collection. But the Council has no reason to complain; it receives a sum second in amount only to that collected last year; it conciliates and combines all classes and all creeds, and, as was well said, it enjoys the unique distinction among benevolent Societies of being allowed to have its headquarters at the Mansion House, and the hearty and potent assistance of every Lord Mayor in succession. Sir Reginald Hanson has been a most ardent and valuable friend of the Fund, and is evidently ready to serve it further in the future, if elected, as he no doubt will be, to serve on the Council.

THE INTERNATIONAL CONGRESS OF HYGIENE.

EVERY State, European and Transatlantic, will be represented at this great hygienic gathering. The Organising Committee have already enrolled the names of 960 members and the "four figures" will be reached, it is confidently expected, before their books are closed. Local committees have been at work in every province of the Austro-Hungarian Empire, and Prague, Salzburg, Laibach, Czernowitz and Lemberg, with Wiener-Neustadt and Kakonitz, have each contributed to the effective force of the Congress. The Medical Faculty of Vienna, with the various professional societies of the capital, are unwearied in their exertions for the convenience and entertainment of their coming guests, all working together with the determination to make the meeting not only more numerous but also more successful than its predecessors. We announced last week that, to the great regret of the central bureau, the Ministerialrath, Dr. Franz Ritter von Schneider, had resigned his post of president, and that Professor Ludwig, Dean of the Faculty of Medicine, had been unanimously elected in his room. Failing health was Dr. von Schneider's reason for declining the laborious duty; but the committee have succeeded in so far inducing him to accept office that he will take part in the proceedings as honorary president. A highly distinguished name will thus be secured for the official staff, and it is possible that the discussions may not altogether be deprived of the presence and participation of certainly one of the most accomplished of contemporary hygienists. As we write, we learn that subtropical hygiene will be represented at the Congress by Dr. Pedro à Pardo, the delegate of the Argentine Republic. Dr. Pardo, for many years the head of the health department in the Buenos Ayres Government, and dean of the Medical Faculty in its university, brings with him high credentials for the effective discharge of his mission.

TYPHOID INFECTION IN MILK.

IN a paper on Typhoid Infection in Milk, Dr. Ali Cohen gives an account of an epidemic in Groningen from Nov. 1884, to March, 1885. The infection was traced to a dairy in the suburbs where two persons had suffered in October from continued fever followed by hypostatic pneumonia. Two others were attacked by undoubted typhoid fever, and died in consequence. At one corner of the dairy there was a manure heap, at another a pump, and close by a watercloset. This latter was used for the patients' dejecta. The milk of course was sold in the town, and the water from the pump was used for cleaning the cans and all necessary uses of the dairy. All the cases of typhoid in the

town were those of people who bought milk from the dairy. Inmates of houses in which cases of infection occurred who dealt elsewhere escaped. In two cases the disease was induced by water drunk from the pump. A house close to the dairy possessed a pump which gave foul water. Two of the inhabitants, therefore, drank the clearer water of the dairy pump and were attacked, while two others who drank the foul water escaped infection. Forty-six cases of typhoid in the town could be indistinctly traced to the dairy, since no one who purchased milk elsewhere was attacked. Even boiling the milk appears to have been unavailing, as fourteen people who drank boiled milk suffered, and three who took it only in coffee. That the disease was due to the milk is evidenced by the fact that people in different parts of the town under totally different hygienic and social conditions suffered, the only bond of connexion being the milk purchased from the dairy. Dr. Ali Cohen remarks that this is a very weighty point, since in other epidemics of "typhus" due to drinking water most of the patients lived in the same place and under the same hygienic, or rather unhygienic, conditions.

SCIENCE AND RELIGION.

EVERY candid man, whatever his convictions, must sympathise with the purpose of the Victoria Institute, whose primary aim has been to promote the examination and, if possible, the reconciliation of apparently opposite scientific and religious views on questions of common interest. The address delivered by Professor Stokes last Tuesday week in the institute was distinguished by a fairness of argument which was characteristic of this purpose. As he pertinently observed, it is necessary first of all, in order to arrive at a just conclusion from such discussions, that there should be a disposition to follow the guidance of truth wherever it may lead. The effort to do this does not imply merely that supple versatility of intellect which goes with the habit of lightly turning over prevalent opinions without any serious attempt at mental penetration. What it does imply is a resolute and patient sincerity in dealing with facts and opinions from whichever side of the discussion they may come, while admitting for all concerned the possibility of misunderstanding. If arguments of this kind were more often conducted in a dispassionate spirit, we should hear less of the antagonism between science and religion. We will confess that we have no belief in the reality of this supposed antagonism. The conflict, when it arises, is rather between the votaries of one creed or the other than between the creeds themselves. Nor is it found that the best minds engaged on either side are the most bitter partisans. It is not usually the laborious investigator of scientific problems who concerns himself with the disparaging statements of revelation. It is not the man whose chief desire is to model his belief, his daily thought and action, according to the plan of an inspired Scripture who cavils at the honest doubts of the scientific reasoner. In both of these types there is not wanting the charitable fellow feeling which comes of personal sincerity and seeks to promote agreement wherever that is compatible with a conscientious exercise of judgment. Contentions arise much more commonly from the impatience of half-instructed disputants. The unwise immoderation of persons of this class has done much to obscure the harmony naturally existing between the truths of science and those of revelation, a harmony which has been repeatedly denied but never disproved, and which is to-day more widely admitted than perhaps at any former time in the history of this controversy. The address above mentioned was itself a model of reasonableness, and in this respect may serve as a pattern for any who may hereafter discuss from either standpoint the subjects with which it dealt.

THE SANITARY CONDITION OF MARGATE.

MARGATE and its sanitary condition continue to engage public attention, and the Town Council have published a report by Professor Corfield on the mortality returns of the borough during the six months ended June 30th of the present year. The report shows "that the borough has been during the past half-year remarkably free from zymotic disease of any kind"; but no one is content with this fact, if Margate retains conditions which are liable at any moment to be a source of danger to the inhabitants and visitors. A clergyman who visited the town with his children last year writes to the papers that six of his family were ill with diarrhœa within a week, and one lingered on to die on their return home. This death would not affect the Margate rate of mortality; but who can say how many more cases of this kind there may be? Families visiting the seaside for the benefit of their health do not desire to inhale the exhalations from hundreds of cesspools, however much these may be diluted by the sea breezes. Last year showed Margate to be the seat of a considerable prevalence of typhoid fever, and the town still has about it all the conditions to foster this disease. It would be a misfortune if the public mind were quieted before the Town Council have recognised the necessity of performing the most elementary duties of a sanitary authority—viz., the provision of a safe water supply and of a proper system of excrement disposal. As a mere matter of pecuniary investment, the necessary outlay would have an ample return in the security it would give to the health of the many persons who annually frequent this locality. Until the Town Council have fully complied with the recommendations contained in Dr. Page's report to the Local Government Board, and are able to assert that the conditions which are therein properly condemned no longer exist, it is impossible for intending visitors to think of Margate as a town in which proper precautions are taken to secure them from disease.

PHOSPHORUS AND INTELLECTUAL ACTIVITY.

WHETHER the now famous aphorism, *Ohne Phosphor keine Gedanke* (Without phosphorus no thought), originated with Büchner, or, as a recent writer believes, with Moleschott, the phrase has doubtless been dragged into use in a most unjustifiable manner, especially by the proprietors of drinks and nostrums containing, or said to contain, phosphorus, and which are on the strength of this urged indiscriminately on all who have brain work to do, as well as on all who suffer from any affection which tends to impair the functional activity of the nervous system. This, of course, is about as sensible as the celebrated advice to Verdant Green to lay in a stock of "Reading" biscuits to assist his reading. The writer referred to, Mr. Atwater, is positive that Moleschott, in using the phrase, had no intention of stating that there was a definite connexion between phosphorus and thought, but meant to show that thought is a function of organised matter. Agassiz is credited with the responsibility of the theory that fish is a peculiarly valuable food for persons who have to use their brains to a large extent, because of its richness in phosphorus. As a matter of fact, however, M. Atwater has found, from a long series of researches, that fish meat contains no more phosphorus than ordinary butcher's meat, so that the suitability of fish as a diet for brain workers, which is by no means to be disputed, depends rather, as Sir Henry Thompson puts it, on its greater digestibility in consequence of its deficiency in fat than on its possession of an abundance of phosphorus. Reading men, in consequence of their want of exercise, their stooping posture, and their frequent confinement for long periods in close and ill-ventilated rooms, are less able to digest their food than men whose work is of

a manual nature and lies out of doors. They are thus liable to flatulent dyspepsia, associated, as Dr. Ralfe has pointed out, with alkalescent urine due to excess of carbonates of soda and potash. Urine of this kind causes deposition of phosphate of lime, and this has led some observers to conclude that it is the brain work which causes the apparent excess of phosphorus in the urine, and which therefore requires a diet specially rich in this element, whereas the phosphatic urine would appear in reality to be only an indication of disordered digestion due especially to a want of proper aeration of the blood. The recent researches of Zuelzer and others seem to point to the fact that the excessive elimination of phosphorus by the urine is associated rather with nervous depression than with nerve activity, the phosphorus being retained in the body in the latter instance to supply the waste caused by the increased metabolism.

THE RAILWAY WHISTLE NUISANCE.

BARON DE WORMS has done as much as can at present reasonably be required of him to alleviate one of the lesser evils of city life, by engaging that the Board of Trade will interest itself to ascertain how far the annoyance caused by the whistle of railway trains can be abated. It is perhaps hardly to be expected that the use of this form of signal, in so far as it is deemed necessary, should be dispensed with. When, on the other hand, it is needlessly employed at the caprice of an engine driver—and such a case is not imaginary,—the ears of the public have surely some right to consideration. Nay, we may fairly be allowed to ask if no alternative plan can be suggested to obviate or to render less frequent the necessity for signalling in this way within the walls of railway stations and in tunnels. A shrill steam whistle is capable of injuring the drum of the ear so as to cause deafness, and the risk of this occurence is increased when the sound is intensified by concentration within a limited space. It must be allowed that this danger, though real, is not one of great urgency, but its diminution would nevertheless be a distinct advantage. Householders in general assuredly do not, on their part, feel indebted to railway companies, for the signal shrieks which now and then disturb their slumbers, and may even prove so great a nuisance as to compel a change of residence. The sick in particular are much to be pitied when the scanty sleep which is to them a necessity of treatment is thus rudely scared away. It is therefore evidently desirable in the public interest that the use of the whistle should in future be limited as far as possible by some regard for amenities which are now too little considered.

HEPATIC CIRRHOSIS IN CHILDREN.

THAT cirrhosis does happen in childhood is now generally admitted; but the occurrence is still rare enough to make all cases worthy of note. The journal of the American Medical Association reports a paper on the subject read at the meeting of the Association of American Physicians at Washington on June 2nd by Dr. R. Palmer Howard, Dr. S. Weir Mitchell presiding. He reported two cases in which cirrhosis of the liver was present in children, brother and sister. Most unfortunately, the reporter gives no particulars further than saying that sections of the organ were exhibited. Dr. Wm. A. Welch described a case in a child of twelve years. The child had suffered from malaria, and had come from the coast of Africa. Dr. Welch said that most cases of malarial origin had been reported from the coast of Africa. Dr. Forsheimer had seen two cases (one eight years old) which he considered due to syphilis. One, with a distinct history of syphilis, is under observation in the last stage of the disease. Dr. Forsheimer thinks it clear that syphilis is the most common cause of cirrhosis of the liver in children. In the other, at the necropsy the hobnail liver was found. Dr. William Pepper of Philadelphia reported a case in which cirrhosis of the liver followed measles in a child eight years old. During the measles catarrhal jaundice occurred; subsequently the symptoms of developing cirrhosis appeared, and death by coma ensued. The whole duration of the case was not less than a year. At the necropsy a typical hobnail liver was found. Here, then, are six cases of hepatic cirrhosis in children. Though alcohol is not mentioned, it might have been more explicitly excluded. The causation is assigned to malaria, inherited syphilis, and measles.

ADVERTISEMENT IN PRACTICE.

IT is much to be regretted that some cause, probably connected with the still prevailing commercial depression, has, particularly of late years, exposed an ancient weakness in the armour of medical ethics. We refer to the system of trade competition and of self-advertisement resorted to by not a few qualified practitioners. It is needless to say that this custom is not in accordance with a true idea of professional duty. The business of a trade is in itself something different from the practice of a profession, and especially of such a one as medicine. The object of the latter is not merely to make money, but to acquire and apply knowledge for the treatment of disease, and to bear responsibility, such as cannot be appraised in coin alone. It should therefore be evident to most unprejudiced minds that its appropriate methods are not those of the ordinary tradesman. The distribution of handbills soliciting a trial of the benefits to be obtained at some private dispensary and offering treatment at a trivial cost are certainly in strict accord with the usages of the retail dealer, but they convey an unfair and misleading impression of what is really implied in medical attendance. Not only do such practices lower to an absurd degree the public estimate of such attendance, but they offer the unseemly spectacle of a mere trading competition between medical men for the money proceeds of professional service. It has been urged by some that this system suits the pockets of the poor working class. In answer to this argument we might quote innumerable instances in which medical men in general practice have given their best services at little cost without any of the blatant pretension of the quasi-charitable establishments. We might also remind our readers that it is by no means the poor only who avail themselves of the sixpenny dole of advice with medicine which is offered by the latter. Let it not be thought that we dispute the right of practitioners to adjust their fees where necessary to the condition of their patients. It is not the feeling or exercise of consideration in this particular, but the ostentatious advertisement of such consideration with a view to profit that we object to. Some are more tried than others by the temptation to self-advertisement. We have considerable sympathy with young practitioners about to enter general practice as regards this question. Slender means and insufficient introduction are often combined in their case to make rapid success very desirable if not necessary, and to weaken the restraints imposed by professional feeling. We should, however, advise any who are tried not to give way. Success, when it comes, will be better worth having. Practice will be of a superior quality, for it commonly happens that the character impressed upon it at the outset continues with it, and of this the public are not ignorant. With a view to avoidlng the risk of long waiting, and the impatience of scruple which it may entail, one hint may be borne in mind. We allude to the advantage of choosing as a nucleus of practice some spot in the zone of increasing population which invests our cities, or even in a rural district, rather than a long established neighbourhood. In the former there is sure to be some demand for the services of an incoming practitioner such as cannot be counted on in older districts, however

populous. By the use of some common shrewdness in this and similar matters, it is still quite possible for young practitioners to exercise their calling profitably without resorting to usages alike unworthy of the practitioner and of his art.

THE HEALTH OF THE POPE.

OUR Rome correspondent writes:—"The sun has entered Leo and the thirteenth Pope of that name abides in the Eternal City when all who can have fled—upper ten thousand, senators, deputies, and *corps diplomatique*. It is the policy of the Curia which keeps the Pontiff immured in the Vatican; but his Holiness accepts the 'situation' with alacrity, and, so far as his health goes, seems the reverse of a sufferer. Much nearer eighty years of age than seventy, he displays an elasticity of mind and a vigour of body which are the envy, if not the reproach, of others far his juniors. This mental and corporeal energy, put forth as it is in a temperature wellnigh tropical, is hardly inferior to that of his middle age, when, as Archbishop of Perugia, he would indite a long Latin epistle in the morning, join a shooting party in the forenoon, and return with the best bag at nightfall, to celebrate the achievement in Ovidian distichs or Catullian hendecasyllabics before retiring to rest. His day begins at 6 A.M., when he rises, takes the cold bath, which he finds so invigorating, and, but for the brief interruption of his slight and admirably regulated meals, works steadily on till late into the evening at his multifarious tasks, theological, diplomatic, and administrative. For the present he is relieved of the numerous and fatiguing audiences which came to an end only last week; but just the other day he presided at the closing ceremony of the Leonine Institute of Literature, and as examiner and adjudicator took for more than three hours the chief part in the proceedings, which he wound up with a brilliant address on the moral and intellectual advantages of an oft-renewed familiarity with Homer, and Virgil, and Dante. To these masters, but mainly to the third, and to his favourite 'Angelic Doctor,' he recurs with enhanced delight now that the ordeal of his Thursday audiences is at an end and his cares are chiefly those of administrative routine. Whether Leo XIII. will see 'the years of Peter,' like his predecessor Pio Nono, or whether he will not, his union of venerable old age with energy of mind and body will long be noted in Pontifical annals, and will in high degree redound, let it also be said, to the skill, the care, and the devotedness of the Vatican medical staff."

A STRANGE CASE.

THE *Retford Mercury* of July 16th contains the report of an inquest touching the death of a young lady aged twenty-six years, a private governess. She was out with her pupils, and after crossing the railway she left the children and returned to the line ostensibly to find a watch she said she had lost. The driver and guard of a passenger train deposed that deceased deliberately laid herself down on the rails, and the jury adopted their evidence, and returned a verdict of suicide. Dr. Savile examined the body after death. He stated that he did not make a *sectio cadaveris*—the coroner did not think this necessary; but from an external examination he obtained no evidence that deceased was pregnant. No motive was assigned for her committing suicide; in fact, at breakfast time on the day of her death she appeared quite cheerful. It seems to us that, as the question of pregnancy was suggested as a possible motive for the fatal act, it was highly desirable that this should have been determined beyond doubt, and that for this purpose a complete post-mortem examination should have been made. The mere mention of deceased being *enceinte*, although unsupported by any evidence and contradicted by some, is warranty enough for a coroner's post-mortem order, for surely, in considering a case of supposed suicide, something is due to the memory of the victim and the feelings of her bereaved relatives. We are not by any means convinced that the death was suicidal. The testimony of the guard and engine-driver was truthful, no doubt, as to observation of facts, but the inference they drew from the facts is open to question. A person seeing a train approaching, and finding himself in imminent danger of death, may become either giddy or fixed trance-like, and unable to make a sufficiently directed exertion to escape the threatened catastrophe. Many such cases have been recorded. Medical evidence on this point should have been given at the inquest.

SANITATION AT LEICESTER.

THE annual congress of the Association of Municipal and Sanitary Engineers was held at Leicester on the 15th, 16th, and 17th inst. There was a large attendance of members, most of whom occupy official positions in various municipal corporations. Amongst the papers read and discussed was "Refuse Destructors for Large Towns," by Mr. C. Jones of Ealing. He described the one erected at Ealing, which had given satisfactory results. Mr. Howson of Leeds referred to the destructors in use at that town, which are situate in a densely crowded locality, and do their work without causing a nuisance. Mr. T. Birch read a short paper on "Sewage Treatment," and criticised some experiments undertaken in connexion with the metropolitan sewage, and the different results obtained with different samples of sewage. The general opinion of the members seemed to be that laboratory experiments conducted on a small scale were entirely fallacious as a guide to practice when enormous quantities had to be dealt with. A paper by Mr. W. Eassie on "Cremation" gave rise to an interesting discussion, many of the members citing instances that had come under observation in their official capacity of the harm arising from earth burial in improper places and crowded communities. This paper was somewhat appropriate for Leicester, as the Town Council has recently had under consideration the desirability of erecting a public crematory, and has gone so far as to get complete plans prepared for the same.

BALDNESS.

A LECTURE on the subject of Baldness, its Causation, and the Rules and Methods for its Prevention, delivered by Dr. Jackson, of New York, has lately formed the text for a variety of remarks in the daily press, with special reference to the increasing tendency to premature baldness amongst men, and to the influence of the prevalent custom of the "morning tub" in bringing about the condition. Premature baldness has no doubt existed amongst mankind as long as records go back, but to what extent it prevailed in past ages, and in different countries, races, and conditions of men, is not very clear, nor are any very trustworthy facts forthcoming for comparison in the present age. However, there seems little doubt that premature baldness is on the increase. Putting aside such forms of loss of hair as depend on definite and well-known diseased conditions, it must be confessed that our knowledge is not very precise as to the cause of the form known as alopecia senilis. The reasons why man should be specially selected, and why the distribution of the baldness should be so peculiar and constant, are problems hard to explain. There is no doubt that premature baldness of this kind is very frequently hereditary, and is entirely a local matter; but where such tendency is present the existence of any local or general disorder readily excites its onset. Some cases also we must ascribe to defective nutrition brought about by actual disease of

other parts of the body, by the increased wear and tear of life of the present day, and such-like influences. But there exist still other cases for which it is difficult to assign a cause, and here the action of tight hats in interfering with the local circulation, the continuous wearing of injurious headgear in destroying the texture of the hair, have been invoked with questionable force. The habit of washing the head each morning and the neglect to replace the oily material is no doubt in time injurious.

"RELATIVE RANK."

THE following remarks from the columns of our contemporary, the *Broad Arrow*, appear to confirm the views we have consistently advanced on the question of relative rank in the Army Medical Service:—"Upon relative rank as such we have had our say. It is not substantive rank, and for the purpose for which it was first instituted it still exists. Upon the proposal to substitute honorary rank for it, we will only observe now that, whilst we suspend our final judgment, we have as yet seen no argument that can commend it to our support. It can add nothing whatever to the dignity and status of medical officers, for it would infallibly expose them, as members of a healing profession, to much captious satire, and its adoption would, we fear, prove a veritable disservice. We confidently believe that, were army medical officers polled, a majority of the best men would be found eager to repudiate every claim to honorary rank, and would declare that the idea is repugnant to their instincts and professional susceptibilities; and, though the voice of these men may not be heard in the prevalent clamour, there is no reason why their existence should be systematically ignored."

THE SMOKE NUISANCE.

THE Select Committee which was appointed to consider Lord Stratheden and Campbell's Smoke Nuisance Abatement Bill has made its report, and has confined its amendments within exceedingly narrow limits, making in effect only one alteration in the proposed measure. That alteration has for its object to place clubhouses, hotels, and refreshment rooms under the operation of the Smoke Acts of 1853 and 1856. The form, then, in which this promising piece of legislative work appears likely to pass the House of Lords will apparently involve us in the most hopeless maze of jurisdictions and authorities. The Bill itself will empower the vestries to impose regulations for the consumption of smoke upon the users of existing stoves, and the Metropolitan Board to lay down rules as to the construction of new grates, thus giving rise to a sufficiently perplexing variety of bye-laws and administrations. But, to make a bad thing worse, the extension of the older Acts will enlarge the sphere of police authority in relation to these matters, so that in the same street there will be three different municipal authorities, administering three different systems of bye-laws, and acting through three different inspectors, to repress the nuisance of smoke contamination of the atmosphere. Surely nothing could be more feeble. If any one of the departments which are thus to be yoked together in an ill-assorted team were set to do this work alone, there would be some chance of its being taken up zealously and done effectively. But when success depends upon concerted action, it is ridiculous to suppose that it can be attained by such an awkward squad as the present proposal will collect. The City Police must co-operate with the Metropolitan Police, and these two again with the Board of Works; and when these metropolitan powers have agreed as to a course of action, they must bring all the vestries within their jurisdiction into co-operation. To organise concerted action on such a scale would demand the genius of a Chatham. The concert of Europe is a simple thing and easily manipulated by comparison. Yet without this concerted action the whole scheme is foredoomed to failure. How can the local vestry visit with penalties the private occupier whose window garden is smirched with soot from the neighbouring chop-house? The exemption of hotels and the like from the present Act is particularly unfortunate, for no restrictions can well be less strict than those of the Act of 1853, to which they are remitted. These buildings are confessedly the worst offenders in the matter of smoke, and the statute law has conspicuously failed in operation to grapple with the nuisance. Therefore these buildings are to be removed from the operation of the new bye-laws and left to the control of the ineffective statute. Truly a wonderful scheme! But let us add a word here. For the glaring deficiencies of this Bill we do not blame its promoters. They have undertaken to make bricks without straw; and though it may be open to a critic to cast doubt on their discretion in so doing, it is hardly fair to complain of the brick-making.

THE BERGEON TREATMENT OF PHTHISIS.

DR. FRANCIS KINNICUTT of New York (*Boston Med. and Surg. Jour.*, July 14th) publishes a brief account of the results he has obtained after a three months' trial of Dr. Bergeon's method of treating chronic disease of the lungs and air passages by means of gaseous enemata. "The apparatus employed was Dr. Morel's of Paris; either the Richfeld springs or the Sharon water, preferably the former, were used to charge the carbonic acid gas (which was freshly prepared for each enema) with sulphuretted hydrogen." Nine cases were so treated, with results which corroborate some of the statements made by Dr. Bergeon. Dr. Kinnicutt says that there seems to be no doubt that the method ameliorates many of the distressing symptoms of advanced phthisis, lowering the pulse, reducing temperature, diminishing the severity and frequency of the sweats, markedly diminishing the amount of expectoration, and improving the appetite. But he has no data as to its capability of arresting phthisis in an early stage. In all the cases the disease was advanced, and in two at least the improvement appears to have been striking. The table of cases includes one of paroxysmal asthma, in which the attacks were completely relieved after a treatment of three days. In the remainder—one a case of pulmonary abscess, another of chronic bronchitis, and the others of phthisis—the treatment was pursued for periods of from eighteen to thirty-nine days. As a contribution to the subject, and an encouragement for further trial of the plan, Dr. Kinnicutt's paper is timely.

CAN IT BE TRUE?

THE *Ilkeston Advertiser* records a case of flogging, the facts concerning which, if correctly reported, are an outrage on humanity. It is stated that a child, aged seven, convicted of the theft of a watch, was ordered to receive four strokes with a birch rod. Our contemporary's report includes a copy of a letter from Mr. John J. Tobin, the doctor called to attend the child after its castigation. It is there stated that the boy was suffering from "lacerated wounds on the side and belly inflicted by the policeman's lash." "The wounds, fifty in number, had penetrated deep into the cellular and muscular tissue; the child was feverish and sickly." The doctor's statement contains the following: "I understand also that the child was arrested and taken out of bed at 1 o'clock in the night, and kept in a solitary cell until bail was given next day." If the above description of the punishment and its effects is accurate, we have no hesitation in saying that there is someone who deserves similar chastisement with compound interest. Since writing the above we have been informed that Sir

Walter Foster, M.P., who saw the child subsequently to the punishment, has interrogated the Home Secretary, and that the latter has undertaken to see "that where there is any doubt about the robustness of a boy's health a doctor shall be consulted before he is flogged." This, no doubt, is an important concession, but it does not affect the question as to the injuries the boy Buckbury is said to have received. It is only just to add that Mr. Matthews, in his reply to Sir W. Foster, stated that the flogging took place "in the presence of the police inspector, his wife, and a Mrs. Knight, who attended at the request of the boy's mother"; and, further, that Mrs. Knight did not think the punishment severe. The flogging took place on the 11th inst., and on the 25th inst. the senior surgeon of the county infirmary examined the boy and reported him quite well. Fourteen days had elapsed between the date of the flogging and the examination made by the infirmary surgeon; and Sir W. Foster, in a letter to a contemporary, says that he saw the unhealed wounds five days after their infliction.

THE PREVENTION OF RABIES.

DR. WHITELEGGE, medical officer of health for the borough of Nottingham, has recently given considerable attention to the subject of rabies in dogs, and has pointed out that in the year ending March last 35 cases of this disease occurred in Nottingham, and 64 cases in various animals within a circle of about five miles around the borough. In 5 cases the diagnosis was verified as the result of inoculation by Professor Horsley of the Brown Institution. Of 49 rabid dogs referred to, 18 are known to have been bitten; the history was also clear in the case of 10 sheep and 2 cows. Of the human beings bitten, six went to Paris to undergo the Pasteur treatment, and in two others cauterisation was employed. One man bitten in the hand, in October, 1886, by a strange dog died in January, 1887, of hydrophobia. A marked reduction in the number of cases of rabies followed the imposition of the muzzle; 243 stray dogs were also destroyed in less than four months. Muzzles can now be used which cause no distress to dogs, and with a view of stamping out this essentially preventable disease their general use should be made imperative.

THE PERMANENT BATH.

SINCE the brief note we published last week upon the alleged value of continued immersion in a bath for the relief of dropsy, we have seen a paper by Dr. James Barr, which will appear in the forthcoming issue of the *Liverpool Medico-Chirurgical Journal*. Dr. Barr gives details of the case of a girl, eighteen years of age, who was in a most critical condition from pyæmia, acute periostitis of the left femur, acute arthritis of the left hip and knee joints, and extensive bedsores. It was decided as a last resource to immerse the patient in a boracic bath at a temperature of about 95°F. For seventeen weeks she was thus kept continuously immersed, with the most satisfactory results. Dr. Barr appends a case of pyæmia treated for four months in a bath by Mr. Chauncy Puzey some years ago. It is evident that the practice is one which might well be more widely adopted, and there does not appear to be any serious difficulty in carrying it out. As Dr. Barr points out, it was a plan long since advocated by Hebra in cases of extensive burn and widespread dermatitis, and at Vienna bath-rooms specially adapted for the purpose are fitted up; but in this country it has been but seldom resorted to, one instance which occurs to us being a case of acute pemphigus, which Dr. Southey brought before the Clinical Society five or six years ago. Dr. Barr's paper is additionally interesting from the description he appends of the "hydrostatic bath" introduced by Dr. Neil Arnott, which consists in supporting the patient (without total immersion) in a bath of water of sufficient depth to permit of it. The description is given in the first edition of Dr. Arnott's famous work on the "Elements of Physics," and it is to be regretted that in the later editions this description should have been curtailed by the editors. The ordinary form of water-bed, although involving less management, is certainly not so well designed for the purpose in view as this very ingenious plan of Dr. Arnott's.

THE GENERAL COUNCIL AND IRREGULAR PRACTICE.

WE would direct attention to an "important notice" which appears on the advertisement sheet (p. 39) of our present issue, in respect of a resolution passed by the Medical Council on April 21st, 1883. The resolution runs as follows:—

"(*c*) 'That the Council record on its Minutes, for the information of those whom it may concern, that charges of gross misconduct in the employment of unqualified assistants, and charges of dishonest collusion with unqualified practitioners in respect of the signing of medical certificates required for the purposes of any law or lawful contract, are, if brought before the Council, regarded by the Council as charges of infamous conduct under the Medical Act.'"

The publication of the resolution at the present time would seem to indicate an intention, on the part of the General Council, to act with vigour in the case of persons whose irregular conduct in the manner specified may be brought under its notice.

SUNSTROKE AND ITS PREVENTION.

SEVERAL cases of sunstroke have recently been reported from the west of England, and intelligence from America shows that deaths from this cause have also been remarkably frequent there. A few observations on this subject should therefore be not unseasonable at the present time. To speak of sunstroke as being due to more causes than one may sound at first sight rather like a contradiction in terms, but there can be no doubt that besides the principal influence at work in such cases there are others of real though secondary significance. In seeking to explain the causation of this morbid state we must, indeed, regard at least two different conditions as commonly acting together to produce the result. One of these is external heat, not necessarily that of the direct solar rays; the other is the presence in excess of impurities in the blood circulation, with a want of due nutrition in the tissues which it supplies. The consequence of this abnormal state of body is necessarily to delay the blood current, and the state of congestion thus engendered in the nerve centres of the brain and cord renders the latter unusually irritable to the action of external stimuli, of which external heat is, for the case we are discussing, the most important. It follows accordingly that prevention must include some care as to modes of living, as well as means of regulating or resisting heat from without the body. For example, the free use of alcoholic stimulants, which tends to impair nutrition, is no longer considered to be advisable; while tea and coffee, which check the formation of waste products, are proportionately valuable. Tight clothing about the chest is generally condemned as being likely to impede the aeration of blood in the lungs, and experience has proved that for a similar reason the imperfect ventilation of workrooms in warm summer weather is conducive to heatstroke. As regards protection against the sun's rays, it should be remembered that not only the head but the back of the neck must be suitably guarded in order to ensure the traveller against the risk of injury. The

wearing a damp handkerchief, or a leaf, such as that of the cabbage, next the head has also been found very useful. One word as to the immediate treatment of a case of sunstroke. In some instances doubtless not even the readiest assistance will save life, but in case of need it is well that all should bear in mind that the most effectual form in which first aid can be rendered is the application of cold—as cold water, ice, &c.—to the head and neck.

A SCHOOL-CLOSURE INCIDENT.

A CASE of importance in connexion with school closure on account of infectious disease under the Education Code is likely to come before a superior court. The master of an elementary school at Falmouth, who in January last closed his school on account of measles, under an order of the urban sanitary authority, sought to recover £20 from that authority as compensation. It is well known that such closure involves at times a substantial loss to schoolmasters, and the claim was based on Section 308 of the Public Health Act, which is to the effect that when any person sustains any damage by reason of the exercise of any powers of that Act in relation to any matter in which he is not himself in default, full compensation shall be made to such person by the local authority exercising the powers. But the sanitary authority in this and similar cases acts, not under the provisions of the Public Health Act, but under a code issued by the Education Department of the Privy Council. Taking this view, the magistrates decided in favour of the authority; but at the request of the complainant they have granted a case for the superior courts. We would gladly see the schoolmasters compensated for such cases, and this at the cost of the district for the benefit of which the measure is adopted, but it seems to us doubtful whether the sanitary authorities can in the present state of the law undertake that responsibility.

THE CORONERS' CONSOLIDATION BILL.

THIS Bill, which has been introduced by the Government in the House of Lords, is intended to be simply what its title dubs it—a Consolidation Bill. It is not to make any change whatever in the existing law, and one or two alterations in the letter of existing statutes will serve only to bring the authorities into conformity with what is now established practice. Thus, for example, an old statute of the time of Edward I. requires that a county coroner shall be a knight. This law, though unrepealed, has become quite obsolete, and has long been a dead letter; it is accordingly destined to be quietly dropped. Some half-dozen other similar changes will also be made in the statute-book, but the effect of the Bill will be to gather up and focus in a single document the multifarious law relating to coroners which has now to be picked out piecemeal from two-and-thirty different Acts of Parliament, supplemented by the unwritten "common law."

A BONE-SETTER'S CASE.

IN our last issue we noticed the bone-setter's calling and mentioned one or two instances of egregious blunders committed by quack practitioners. As a sequel the following gives point to our previous contentions. An inquest was held on July 20th at Newcastle touching the death of Joseph Davison, aged forty-two years. Deceased met with an accident which caused a compound fracture of the leg. He was attended to by Dr. Allen, who very properly applied antiseptic dressings. For several days the patient progressed favourably. There was no fever, and the wound remained healthy. Unfortunately for the deceased, he and his friends determined to call in a bone-setter. The latter took off the splint and dressings employed by Dr. Allen, and put on two other splints and applied bread poultices to the wound. Putrefaction set in, and ultimately death occurred from blood poisoning. Dr. Short, who saw deceased subsequently to Dr. Allen's withdrawal from the case, deposed that the bandages were too tightly bound, but that deceased refused to allow him to slacken them. Shortly before death, Dr. McIntyre visited Davison, and found the wound in a putrid condition. The coroner, addressing the bone-setter, told him that, although not guilty of criminal culpability, he was nevertheless deserving of censure for interfering with a case which had already been treated properly and scientifically by a duly qualified medical man. We commend the remarks of the coroner to all those who prefer the services of a bone-setter to a regular practitioner.

NEPHRECTOMY IN BELGIUM.

DR. THIRIAR of Brussels recently performed nephrectomy on a lady patient at Antwerp, this being the first occasion of the performance of the operation in that city. Indeed, it does not seem to have been performed more than four or five times in Belgium. The case was diagnosed as sarcoma, but turned out to be a large renal abscess. The pain had been very severe. Notwithstanding what was said at the Medico-Chirurgical Society on the advantages of the abdominal method, Dr. Thiriar prefers to operate through a lumbar incision. He commences at the inferior border of the eleventh rib at the distance of eight centimetres from the spinous processes of the vertebræ, and, keeping parallel to these, he carries the incision to within a centimetre of the iliac crest, and then, changing its direction forwards, brings it almost to the iliac anterior spine. The external border of the quadratus lumborum is then in view; the attachment of this muscle to the iliac crest is then divided for two or three centimetres, a proceeding recommended by M. Ledentu of Paris, which Dr. Thiriar finds of great value in giving plenty of room for the subsequent steps of the operation.

THE HOSPITAL SATURDAY FUND.

THE Hospital Saturday Fund has issued sheets for use in various establishments for the purpose of promoting weekly or monthly contributions to the Fund. The workshop collections are to be taken weekly till the 3rd of September. This is the right method, as we have maintained; and if it be duly organised and carried out in the various districts and establishments of the metropolis, we may hope to see a very much larger result in connexion with the Fund than has as yet been realised. Much will depend on the co-operation of employers, foremen, and others, which is asked for by the Council, and which we trust will be heartily accorded.

SMALL-POX AT ABERDEEN.

THE small-pox epidemic is spreading and giving rise to considerable alarm. The disease has affected families widely apart, and the efforts of the sanitary officials to stamp it out have not proved so successful as was at first expected. Last week nearly a dozen cases were reported and removed to the hospital. Adults are being revaccinated in large numbers.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—M. Théodore Jouret, member of the Belgian Superior Council of Hygiene, at Kissingen, aged sixty-six.—Don Santiago Ruli, of Barcelona.

CHOLERA IN TONQUIN.

THE *Revue d'Hygiène et de Police Sanitaire* states that cholera recently appeared in Tonquin in the form of an epidemic which threatened to assume alarming proportions. Thanks, however, to the prompt and energetic measures taken by M. Halais, vice-resident at Hanoi, who called a meeting of the Sanitary Council, under the presidency of M. Nagier, director of the medical service, and saw that the recommendations drawn up by the Council were carried into effect, the epidemic was almost entirely confined to natives, and was soon stamped out. The measures employed comprised the disinfection of all places where there had been any affected persons or any dead bodies, the establishment of an isolated hospital for natives, the increase of the public pail-closets, disinfection of ponds, ditches, cesspits, and recently disturbed burying places, establishment of new burying places outside the town and under the surveillance of the authorities, careful sanitary inspection of the prisons, restriction of the use of the river water to the Public Works Department and to certain specified localities, inspection of the food on sale, provisioning the country with rice for fear of a famine, and the formation of a permanent native hospital. The ambulance hospital established for the natives is said to have been most successful, fully half the cases which were treated there having been cured.

POISONING BY "LORDS AND LADIES."

Two children were recently poisoned at Dogsthorpe, Peterborough, as is alleged, from eating some leaves of the plant commonly known as cuckoo-pint, or "lords and ladies" (Arum maculatum). One, a boy aged seven, died after much vomiting and purging within twenty-four hours. We have some doubt whether the *leaves* were eaten, for, as a rule, at this season of the year they have died down, or become shrivelled, leaving a peduncle closely set with bright-red berries. Probably the latter were ingested. The acrid principle, which is destroyed by heat, causes a sharp pricking sensation of the tongue, and in a recorded fatal case the tongue was so swollen that deglutition was difficult or impossible. We are not informed whether any portions of the plant were discovered in the vomited matter in this case.

FOREIGN UNIVERSITY INTELLIGENCE.

Berne.—Dr. Brühl has been appointed *Privat Docent* in Gynæcology.

Bonn.—Drs. T. Rumpf and E. Ungar, *privat docenten*, have been made Extraordinary Professors.

Bordeaux.—M. Coyne, Professor of Pathological Anatomy, has been appointed an Officer of Public Instruction. This appointment is hailed with gratification by the French provincial medical press, which, as a rule, has some cause for its complaint that nearly all the Government distinctions and appointments are monopolised by the Parisian members of the profession.

Breslau.—Professor Emil Richter has been appointed Medical Councillor and Member of the Medical Board of the province of Silesia.

Dorpat.—The assertion of a German medical journal that the professors have refused to lecture in Russian is denied by the *Vrach*.

Gottingen.—Professor Graf Hermann Solms-Laubach will probably decline an invitation to assume the post of Director of the Botanic Institute of Berlin.

Innsbrück.—Dr. Rokitansky, Professor of Internal Pathology, has been appointed Dean for the ensuing year.

Konigsberg.—Dr. J. Mikulicz, Professor of Surgery, has been appointed Medical Councillor and Member of the Medical Board of the province of East Prussia.

Leipsig.—Professor W. Pfeffer will next session take over charge of the Botanic Institute, in succession to Professor A. Schenk.

Lille.—To the duties of the Chair of Internal Pathology has been added the teaching of Experimental Pathology. The professor appointed is M. le Dr. Leroy, *agrégé*.

Madrid.—Dr. Don Fausto Garagazza has been appointed Professor of Analytical Chemistry.

Marburg.—Professor Gasser of Bern has been appointed Professor of Anatomy.

Marseilles.—The Chairs of Pathology, Clinical Surgery, and Clinical Medicine are to be filled after a concours to be held at Montpellier.

Montpellier.—M. Gilis, *agrégé*, has been appointed for nine years Chief of Anatomical Studies in succession to M. Chalot.

Paris.—The only candidates for the Chair of Physiology in the Faculty of Medicine, vacant by the death of M. Béclard, are MM. Reynier and Ch. Richet.

Vienna.—Professor E. Ludwig has been appointed President of the International Hygienic Congress, in place of Dr. Schneider who has resigned. Professor Bandl (Gynæcology, &c.) has been refused permission to lecture by the Minister of Public Instruction.

DURING the past six months the Metropolitan Public Gardens Association has received £4337 less than it obtained from the public during the corresponding period of last year. During the four years of its existence the Association has laid out or assisted to lay out forty-three metropolitan gardens and playgrounds, and it is to be hoped that increased and prompt donations will enable it to continue its work, the value of which can only be rightly estimated by those who are brought into daily contact with the inhabitants of the crowded alleys and reeking courts of this modern Babylon.

THE recently issued reports of the Inspectors of Mines to Her Majesty's Secretary of State show that during the past year the aggregate number of persons employed in and about the whole of the mines in the United Kingdom of Great Britain and Ireland amounted to 561,092, of whom 5568 were females above ground. The total number of fatal accidents was 869, and the total number of deaths occasioned thereby 1018; being an increase of 3 in the number of fatal accidents, and a diminution of 196 in the number of lives lost, compared with the totals for the preceding year.

ON the 21st inst. Sir Edward Sieveking presided at the annual distribution of prizes to the students at St. Mary's Hospital Medical School, and at the conclusion of the ceremony was presented by Dr. Broadbent, on behalf of 250 present and past students of the school, with a piece of plate, as a token of their appreciation of his services to the profession and the public and of gratitude for his services to them personally and to the hospital, on the termination of his career in connexion with the hospital school.

M. LABORDE has been elected, by forty-four votes, member of the Section of Anatomy and Physiology in the Academy of Medicine of Paris. His competitors were M. Fr. Franck, M. Gréhaut, and M. Regnard, the first named of whom received thirty-two votes, and the other two candidates one vote each.

THE epidemic of small-pox in Sheffield shows no signs of abatement, fresh cases being daily admitted into the Borough Hospital. Arrangements are being made so that in case of need further hospital accommodation can, by means of temporary iron erections, be provided without loss of time.

WIESBADEN in September next will be the seat of the sixtieth Congress of German Naturalists, at which one of the most important features will be the exhibition of scientific instruments. The latest improvements in electro-therapeutic appliances will be on view. Microscopy will also be richly represented; while the assortment of surgical instruments will, it is announced, be the completest yet exhibited.

THE Italian Government has contributed six thousand lire (£240) to the relief of the cholera-stricken at Catania, and the Minister of the Interior has just sent thither Professor Cervello, accompanied by four other physicians, to investigate on the spot the best means of combating the malady.

IN view of the tropical heat now prevailing in Italy, the War Minister has issued orders that the troops, whether in garrison or on service, for the approaching manœuvres, shall be spared as much as possible.

IN the issue of the *Illustrated London News* for the 23rd inst. an illustration is given of the inspection of the Volunteer Medical Staff Corps in the grounds of Lambeth Palace on the 16th inst.

DR. OCTAVIUS JEPSON, on his retirement from the office of medical superintendent of the City of London Lunatic Asylum, after a long period of service, has been granted an annuity of £800.

DR. MORELL MACKENZIE'S book on the Hygiene of the Vocal Organs, which has reached a fourth edition, is being translated into Swedish, German, French, and Italian.

REPORT
OF
The Lancet Commission
ON THE
WORK OF THE PIT-BROW WOMEN OF LANCASHIRE.

THOUGH representing but an infinitesimal proportion of the three to four million women who work for their living, the pit-brow women of Lancashire have recently attracted a very large share of public attention. In 1878 Professor Leoni Levi estimated the number of wage-earning women at 3,800,000. Mr. Atherley Jones, in the House of Commons, spoke of only 6000 pit-brow women, yet this small body of female workers have raised the strongest party feelings concerning their right to labour at the pit brow. The problem involves social, economical, and sanitary issues, and consequently we resolved to undertake a special inquiry. It is only in some districts, notably in the neighbourhood of Wigan, that women are employed at the mouth of the pits; and much has been said both for and against the practice. We can only deal with the social and economical aspects of the question in so far as they bear upon the health of the population concerned; and certainly all these phases of the dispute are more or less intimately related to each other. Through the courteous assistance of the managers, the proprietors, and some of the local medical practitioners, we were able to visit several coal pits, and saw a considerable number of women at work. At the Winstanley pit an engine was placed at our disposal, and thus we got over rapidly the numerous fields that separate one coal mine from the other. While speaking of this pit we must also record that the women work under cover; this is a rare and welcome exception to the general rule.

The work of the women consists, for the most part, in screening the coal. As the little truck or "tub" comes up from the mine, it is seized by a man, who drags it upon the scales, and when it has been weighed places it upon a line. A woman then takes the truck and pushes it along the metals to a tilting machine, ingeniously contrived to empty the contents of the truck on a screen below. This can be done with but little effort. The screen consists of iron bars some twelve to sixteen feet in length, that form an inclined plane. As the coal slides down this screen the slack falls between the bars, and on either side stand women, who with rakes push the coal along, examining each portion as it goes by. If they notice any defect, any slate in the coal, they at once seize the piece, and with a small pickaxe chip off and throw away the useless part. The photograph exhibited in the Strand, and that was given to many members of Parliament, representing this work, shows the women under their most favourable aspect. Here the women are fairly clean and sheltered; in the great majority of cases they are covered with coal-dust, are often drenched to the skin with rain, and very rarely enjoy any shelter whatever. At all seasons of the year they have to stand by the screens, waiting for the coal; and periods of inactivity following on excessive physical exertion must, in wet weather, occasion chills which none but the strongest can endure with impunity. Nor is the work always limited to what we have just described. The coal very frequently is not screened, but piled up in the form of a large embankment. On the summit is a truck rail; women push the truck to the end of this line, and there, without the assistance of any tilting machine, lift the truck bodily up and throw it over. At one mine, where this was done in our presence, the trucks weighed 3 cwt., the coal they contained from 6 to 7 cwt. To lift and tilt these trucks over, it is necessary to stoop so as to bring the hand right underneath and within a distance of from eight to ten inches from the ground. Nor is this all: the metals placed on the loose coal that forms the embankment rest on a very insecure foundation, consequently the truck often runs off the line, and its little wheels sink deep into the coal. The effort necessary to lift up the truck steadily so as not to spill the coal it contains, and place it back again on the line, requires very great strength of muscle. Mere brute force with little or no skill is brought to bear. At one pit we saw a truck come off the line twice before it could be wheeled to its destination. Here some five or six women were at work with one man to help them; and we failed to notice any difference between the man's work and that of the women. They all mutually helped each other, and the women seemed quite as strong as the man. One of the women even offered to wager that she would lift as heavy a shovelful of coals as any man in the mine. The work of piling up the coal is also done in the open air away from all shelter, and the same may be said concerning the women who go on the top of railway waggons to smooth out and pack the coal on the summit so that it should not fall on the line when the train is in motion. Altogether, in many hundreds of employments, men do not perform work of so masculine a character as that of the pit-brow women.

It does not, however, follow that the work is unhealthy. The medical men whom we were able to see at Wigan all bore testimony to the remarkable strength and healthfulness of the women employed at the pit-brow. Certainly those who did not possess good constitutions could not stand the exposure; but such exposure, if it can be endured at all, must have a hardening effect. Many women who had been accustomed to the open-air work could not bear the confined atmosphere of a factory; and, after trying to earn their living at a mill, gladly returned to the pit-brow. On all sides, it is energetically denied that the health of the women suffers. When we inquired into the condition of the dust-yards of London we were told the same thing. The poor, half-starved, ragged women who, for the smallest pittance, sift the dust and refuse of this great metropolis, were all stated to be free from disease. Surprise is also often expressed at the healthfulness of the men who clean out the sewers, and of the staff employed to fumigate and wash rooms after cases of infectious disease. Nevertheless, and in spite of immunity from disease, no one would care to maintain that these various employments are healthy in themselves. But with regard to the pit-brow women, there is no doubt that the open air, in spite of the wet and cold, is a compensation for a multitude of hardships. The trucks, tubs, or boxes, as they are called, weigh from

2 cwt. to 4 cwt., and contain from 3 cwt. to 6 cwt. of coal. Though the pit-brow women are represented generally as working at the screen, we are assured on good authority that 50 per cent. among them manipulate these heavy trucks. Fresh air and long custom may give them exceptional health and strength; but it cannot be right for women, at least during the period of child-bearing, to even assist in raising such loads from the ground. The working at the screen, on condition that proper cover be provided, is doubtless more healthy than working in a badly ventilated factory. This is a strong argument in favour of the better ventilation of factories, but that does not prove that women can with impunity and all times and seasons do men's work. With still greater force do all these arguments apply to young children. What may be said concerning a fully developed and strong woman cannot be maintained with regard to a young and unprotected child. Yet we have seen children working at the pit brow; one whom we questioned was under fourteen years old; she wore male attire, and was lifting and chipping heavy and very large pieces of coal. Mr. M'Laren declared, in the House of Commons, that there were only some 300 children between thirteen and sixteen working in connexion with the coal mines. If the number is so small, it would inflict no great social hardship to establish by their exclusion the principle that the healthy development of the new generation is the first of all considerations, and that, when such vital interests are at stake, the State has the right to interfere.

Much has been made of the peculiar dress the women wear. The bodice is that of an ordinary working woman's jacket fitted over a common pair of stays; for, in spite of the stooping, most of the women wear stays. The legs are covered with a cast-off pair of trousers, obtained from some male relative or friend. These garments are patched with many colours; and the idea of women wearing men's old trousers certainly does not lend itself to romance. Second-hand clothes, we have always objected, may be the means of conveying infection; but we can scarcely blame poor people for resorting to such economies. Putting this latter question aside, it cannot be said that the women are indecently dressed. They are more securely covered than if they wore skirts, and better able to defy the rude aggression of the wind. With their blackened faces and clothes they are scarcely recognisable, and their appearance is hardly likely to suggest any impropriety. In respect to general decency, the want of proper closet accommodation is of far graver importance. The closets, of the midden type, are out in the open, removed from all dwellings, and clean; but the number was altogether insufficient, and the separation between men and women of a purely fictitious character. The women earn about ten shillings a week; this gives them a certain independence. They have little or no social status to maintain. Among the working classes they are contemptuously called *canacks*, and rarely marry other than collier lads. The working-men miners, with whose representatives we have discussed the question at length, unanimously demand the suppression of the work of women at the pit brow, not because the work effects the health of the women, but because it destroys the homes of the men. The women are not domesticated; they cannot cook a decent dinner; when they are married their husbands do not stay at home, as there are but few comforts to greet them, and this leads to intemperance. The children also are grievously neglected, and the natural result is a deterioration of public health.

Mr. Barnish, the medical officer of health of Wigan, in a lecture delivered a year or two ago, showed that, while the death-rate of England during ten years previous to 1883 amounted to 21·4 per 1000, the death-rate of Wigan during that same period was 27·0 per 1000. At the same time, during these ten years the illegitimate birth-rate for all England amounted to 4·9 per cent, while the illegitimate birth-rate of Wigan reached the high figure of 9·2 per cent. Indeed, the work of women at the pit brow is so far discredited among the working classes themselves, that Mr. Abraham, who in the House of Commons was able to speak in the name of the miners, pointed out that during the last twelve years their number had decreased from 6899 to 4131.

In face of all these circumstances, and if the presence of women at the pit brow is still to be tolerated at all, the State should at least exclude all children, and all girls who have not reached the age of puberty. The provision of means of shelter from the rain should also be made compulsory, and certainly an increase in the number of closets is demanded, as well as the placing the women's closets in a totally different part of the premises to those used by the men. Women during the period of utero-gestation and lactation might, with advantage to the future generation, be excluded from the works. With these restrictions, which we bring forward as the minimum justified by the case, the greater evils would be dispelled; and doubtless the moral pressure of the community at large, and of the mining population in particular, will soon still further reduce the number of women working at the pit brow.

KAKKÉ, OR JAPANESE BERI-BERI.

No. II.

How far the teachings of Mr. Takaki's experiment go beyond the settlement of the kakké problem is indicated by one of his tables, which, we hope, will be expanded and analysed at some future time. By this it is shown that the daily average of the men sick from all causes in each 1000 of the force was reduced under the new dietary from 121·15 in 1883 to 84·45 in 1884, and 52·25 in 1885; and that the annual ratio of cases of sickness for each 100 of strength fell from 323·54 in 1883 to 186·37 in 1884, and 99·25 in 1885. The most astonishing improvement is in kakké, which fell from 27·30 per cent. to 0·59 per cent., but it was strongly marked in all other important directions. Thus "constitutional diseases" sank from 16·58 per cent. to 7·89 per cent., diseases of the eye from 29·75 per cent. to 7·57 per cent., diseases of the respiratory system from 75·07 per cent. to 18·05 per cent., diseases of the digestive system from 83·38 per cent. to 17·99 per cent., and diseases of the integumentary system from 28·85 per cent. to 8·22 per cent. Genito-urinary diseases alone maintained the former level, but this exception only emphasises the significance of the other facts.

These statistics, after all allowance has been made for improvements in general hygienic conditions, place it beyond doubt that Mr. Takaki has achieved a success of very large proportions, and one which hereafter will prove to have a far wider range than has yet been demonstrated. It is probable that his theory will require modification; that error of diet will be admitted to occupy the second place instead of the first in the order of causative agents; but the fact will still remain that by a measure initiated by himself, and carried out with all the courage of a strong conviction, he has been able, not only to quell within the sphere of his action a malady which had baffled all the efforts of his predecessors, but he has shown his countrymen how they may fortify themselves against disease in general, and hope for a progressive augmentation of physical development and vigour.

The dietetic theory of the origin of kakké is not a new one, but it has never before been supported by material facts. The majority of observers of the disease have been inclined to attribute its existence to a specific poison which is generated in the soil under certain insanitary conditions of local origin, and finds its way into the human body by means of the atmosphere, and perhaps of the food and drinking water also. There is certainly much in common between kakké and complaints generally recognised as miasmatic, although the former presents no clinical resemblance to ague or its immediate allies. It has been stated without contradiction that kakké is particularly liable to develop in low-lying and ill-drained districts, and under circumstances of overcrowding. It prevails during the hot, rainy season, and is rare in the dry, cold winter months. Its attacks are directed chiefly against male adults in the prime of life, and are very seldom met with before puberty or after the age of forty-five, while the susceptibility appears to be ten times greater in men than in women. New arrivals in a kakké district are especially predisposed, and suffer more severely than the natives and older residents of the place. It is non-contagious; and, lastly, one attack affords no protection against a recurrence. It is, however, distinguished from typical maladies of the malarious group by the absence of febrile disturbance and periodicity, and by the prophylactic and therapeutic inefficacy of arsenic and quinine. Mr. Takaki, indeed, uses the latter fact as a weapon against the miasmatic theory, and says that "if malaria be the cause, quinine

should have a specific influence over it, while the peasants who are constantly breathing a malarious atmosphere should be more especially attacked by the disease, but there is no positive evidence to this effect." But this argument contains a double fallacy, since it assumes that there is only one kind of miasmatic poison, and that all the various manifestations of malarious disease are necessarily amenable to the same remedy.

If, on the other hand, we endeavour to look upon kakké as a disease of malnutrition, it is not easy to discover any analogy between it and the conditions known to arise from the privation of essential elements of food. The most fatal attacks may occur in subjects of more than average vigour, and, as pointed out ten years ago,[1] and since repeatedly confirmed, anæmia and physical enfeeblement are far from being necessary concomitants. It may also be remarked that the use of a dietary containing a relatively small proportion of nitrogen is not confined to kakké and beri-beri countries, and that in India Europeans under a European scale of diet may suffer severely from beri-beri when living in a district where that complaint is rife amongst the natives. It is of course possible that some of these facts are open to a different explanation, and that others may be contradicted altogether when new information is forthcoming, but for the present the weight of evidence is still in favour of the miasmatic hypothesis. We may, however, regard it as proved by the extraordinary results of the naval experiment that an imperfectly nitrogenised food exerts an especially powerful influence upon the prevalence and intensity of the disease, and that the system may be strengthened against attacks by a diet scale constructed in accordance with European theories of nutrition.

Since the study of bacteriology has gained ground, many observers have looked for a solution of the mystery in the detection of a specific micro-organism in the blood and tissues of affected subjects, and already a claim to success in the research has been advanced by two physicians, Dr. Wallace Taylor of Osaka, and Dr. M. Ogata, of the Tokio University. Dr. Taylor (Transactions of the *Sei-I-Kwai*, August, 1885) states that he has found in the blood and urine of persons suffering from kakké, and also in the soil and canal water of infected districts, and in the rice used as food, a spirillum by means of which after cultivation and inoculation he has been able to produce the symptoms of kakké in the hare, monkey, and rabbit. He finds, moreover, that the organism is not destroyed either in the process of cooking the rice with which it is associated, or by the digestive secretions after it has entered the alimentary canal. Dr. Ogata, after a similar course of investigation, has described a specific kakké bacterium in the blood, and asserts that he has succeeded in conveying the disease to monkeys, dogs, rabbits, and pigeons by inoculation, and to monkeys and dogs by simple admixture of the virus with the food. He has also extracted from the blood of persons who have died from the complaint an acid substance which, by inoculation, induces in the rat a train of paralytic symptoms like those of kakké.

These observations, supported as they are by similar discoveries at the hands of investigators of beri-beri in other countries, are highly suggestive; but until the experiments are reported in greater detail, it will be impossible to judge as to their freedom from sources of fallacy, or to see how far the differences between the two sets of results are capable of reconciliation. It is especially necessary that we should know upon what evidence the two pathologists have assumed that the symptoms caused by the inoculation of the germ into the lower animals are identical with those of kakké in man, for a mere superficial resemblance would be quite inconclusive. Dr. Taylor's discovery of the beri-beri spirillum in canal water and rice, taken in conjunction with Dr. Ogata's assertion that in dogs the virus is efficient when merely swallowed with the food, would lead us to think that the disease must prevail amongst the canine race independently of the intervention of the bacteriologist but it is not known that this is the case.

In conclusion, we may be allowed to remark that neither the etiology nor the intimate pathology of kakké has been removed from the stage of speculation. The necessary inquiry into the conditions under which the complaint is developed in various parts of Japan have not yet been sufficiently carried out, and the pathological researches are in need of confirmation and extension. The problem, however, has been attacked with good will and intelligence from two sides, and Mr. Takaki may already be congratulated upon the magnificent and unassailable results attained by his dietetic experiments, results which alone are sufficient to entitle him to the gratitude of his countrymen and the esteem of his profession.

For the benefit of those who are interested in the subject, a list, arranged in chronological order, is appended of the literature at present accessible to Europeans with respect to kakké:—1. "Kakké," by Dr. Hoffmann of the Imperial Medical College in Tokio, published in the Transactions of the Deutsche Gesellschaft für Natur und Völkerkunde Ostasiens, July, 1873. 2. "Kakké," by William Anderson, F.R.C.S., St. Thomas's Hospital Reports, vol. vii., New Series, 1876. 3. "Klinische Untersuchungen über die Japanische varität der Beri-beri Krankheit," by A. Wernich, M.D., Virchow's *Archives*, 1877. 4. "Lectures on Kakké," by William Anderson, Yokohama, 1879. 5. "Beri-beri, or the Kakké of Japan," by Duane B. Simmonds, M.D., Medical Reports of the Imperial Maritime Customs of China, 1880. 6. "Beri-beri, or the Kakké of Japan," by Stewart Eldridge, M.D., *Pacific Medical and Surgical Journal*, Dec. 1880, and Jan. 1881. 7. "Die Japanische Kakké (Beri-beri)," by B. Scheube, M.D., *Deutsche Archives f. Klin. Med.*, 1882. 8. "Kakké," by Theobald A. Palm, M.D., *Edinburgh Clin. and Path. Journal*, Sept. and Oct. 1884. 9. "On the Cause and Prevention of Kakké," by K. Takaki, F.R.C.S., *Sei-I-Kwai Medical Journal*, April, 1885. 10. "Pathology of Kakké," by Wallace Taylor, M.D., *Sei-I-Kwai Medical Journal*, Aug. 1885. 11. "Kakké amongst the Japanese Maritime Prisoners," by K. Takaki, F.R.C.S., *Sei-I-Kwai Medical Journal*, April, 1886. 12. "The Circulation in Kakké," by Wallace Taylor, M.D., *Sei-I-Kwai Medical Journal*, July, 1886. 14. "First and Second Special Reports upon the Improvement in the Scale of Diet in the Imperial Japanese Navy," 1887. 14. "Special Reports on Kakké in the Imperial Japanese Navy," *Sei-I-Kwai Medical Journal*, April and May, 1887.

[1] On Kakké, St. Thomas's Hospital Reports, 1876.

ETIOLOGY OF SCARLET FEVER.

AT the meeting of the Edinburgh Medico-Chirurgical Society held on July 20th, for the discussion upon Scarlatina, T. Grainger Stewart, M.D., President, in the chair, an interim report of the committee appointed to inquire into the results obtained by Mr. Edington in his research upon the Etiology of Scarlatina was read as follows:—

"Your committee reports that, in accordance with instructions received, an inquiry and experimental investigation has been commenced with regard to the results obtained by Mr. Edington, M.B., and published in his paper entitled 'An Investigation into the Nature of the Contagium of Scarlet Fever.' It will be evident to the Society that sufficient time has not yet elapsed for your committee to have formed a definite opinion upon the intricate and important issues raised; many of the experiments are still in progress, while the number completed is too limited to warrant a distinct conclusion. Before detailing the lines adopted in the inquiry, the committee has to record its appreciation of the courteous co-operation of Mr. Edington in supplying information and affording facilities for the furtherance of the work. So far as your committee has been able to judge from inquiry and observation, Mr. Edington appears to have followed carefully the recognised methods of bacteriological investigation, and to have observed the precautions necessary to ensure accuracy in his laboratory work. Evidence has, moreover, been afforded of the large amount of laborious and long-continued work which his research has involved. While it is impossible in the meantime to report definite results, it appears desirable that the Society should be made acquainted with the general line adopted in the inquiry. This has included the consideration of the following points among others:—1. A preliminary inquiry with the object of defining accurately the conditions observed by Mr. Edington in his research. 2. An inquiry into the characteristics and the specific value of the several organisms which Mr. Edington has separated and described, with inoculation experiments on healthy animals. 3. The repetition of Mr. Edington's observations, including the microscopical examination of scarlatinal blood and desquamation, cultivation experiments with the same materials, and a collateral series of observations on the healthy subject to

control the results obtained. In the further prosecution of the inquiry, the committee will be much helped by the co-operation of the members of the Society, in giving them access to early cases of the disease suitable for experimental investigation; especially to such as are in the earliest stages of the fever, or such as may be deemed to be in the period of incubation.—On behalf of the committee,

"(Signed) T. GRAINGER STEWART, convener."

In the absence of Dr. Brakenridge, who was expected to have opened the discussion, the President called upon Dr. Jamieson to do so.

Dr. Allan Jamieson described the general characters of the recent epidemic in Edinburgh, which, although it has been very extensive, has not been of a very virulent type. Accurate observations have been made at the City Fever Hospital with regard to the incidence and relative intensity of the several symptoms and complications of the disease. It is found that nephritis is commoner in cases of distinct milk infection than in those where infection is derived from other sources. The temperature reaches its maximum on the second or third day of the disease, and desquamation, which is invariably present, commences from the fourth to the sixteenth day, on the tenth in the majority of cases. Desquamation is usually profuse after a well-marked rash, but this association is not invariable. As regards complications of the disease, out of two hundred cases specially recorded, thirteen had rheumatism, thirteen glandular enlargements in the neck, seven nephritis, four diphtheritic sore-throat, and four inflammations of the ear. The primary sore-throat always precedes the occurrence of the rash. In speaking of the etiology of the disease, it must be noted with what great rapidity the contagium can multiply; in this, however, it does not equal the contagium of typhoid fever. The disappearance of the bacillus from the blood at an early stage, as seen by Mr. Edington, is the most natural thing to be expected of it, when it has exhausted the papulum suitable for its maintenance at the crisis of the disease; such behaviour on its part is quite comparable to that of the embryos of filaria. In the treatment, boroglyceride is applied to the throat, and antiseptic mouth washes are used. Warm baths are also employed throughout the treatment, the bath being wheeled to the bedside and the patient placed in it and lifted out again without any change in his posture. Salicin acts efficiently in alleviating the rheumatic complications, and cotton wool, iodine, and iodide of potassium in checking and causing resolution in the cervical glandular enlargements. In the matter of prophylaxis, Dr. Jamieson was not desirous of claiming originality in drawing attention to the treatment by inunction. The method was an old one, but what he did draw attention to as of importance was that the antiseptic should be applied all through the disease, so that the spores of the causative organism, which he believed were deposited in the deep layers of the rete Malpighii, might be destroyed and prevented from ripening in the epidermis, and thus becoming a source of infection. A very important point is the frequent washing of the scalp with carbolic lotion, as the branny scales from this region are specially dangerous as a source of infection. During the recent epidemic there had been 500 cases in the hospital, and they had experienced a mortality of 3·6 per cent. among these patients.

Mr. Edington gave further information than was published in his original paper, as to the size, character, and method of growth of the bacillus separated by him, and described as the cause of scarlatina. Its length, which had been understated, varies from 2·5 to 4·5 μ. In a series of subcultures there is a marked increase in its rate of growth, specially if these subcultures be plate cultivations. In regard to the appearance of the bacillus in the skin not earlier than the twenty-first day, there was no doubt of the fact; and the large number of cases where it had been sought for earlier without result were sufficiently extensive control experiments, the absence of which had furnished ground for some criticism. He showed the appearance of a colony from a plate cultivation by a photographic transparency and the oxyhydrogen light.

Dr. Foulis traced very carefully the history of the Edinburgh epidemic, and showed that of 597 cases of scarlatina reported in the month of February 200 cases had received their milk-supply from eleven dairies, all of which obtained milk from one farm supplying 120 gallons per diem, where there was a distinct source of contamination in the form of severe cases of the disease. A chart thrown upon the screen with the lime-light gave interesting evidence upon this point, showing the localities specially affected in the outbreak. Dr. Foulis urged strongly the necessity of compulsory notification of disease in rural as well as in urban districts, as the only way of preventing such outbreaks.

Mr. Hare spoke of the ways in which a milk supply may become a source of infection. That direct contamination from the human subject was one method was placed beyond reasonable doubt by the Transactions of the International Medical Congress in 1881. These records, however, showed certain cases, no less than five epidemics out of the sixteen described, where the human origin of the infection was not clearly established, and where other factors might be at work. But it was the recent work of Mr. Power and Dr. Klein which had rendered it all but certain that in some cases at least the infection was of bovine origin. The speaker then gave a *résumé* of Mr. Power's paper and of Dr. Klein's experimental results, and demonstrated a series of cultivation and microscopical specimens illustrating Dr. Klein's work, and lent by him for that purpose. He also referred to the question of disinfecting milk by heat, speaking of the difficulties experienced by bacteriologists in rendering it sterile for experimental purposes, and the degree of heat necessary to do so. If the contagium of scarlatina has as low a death temperature as that described by Klein, this difficulty would be obviated; but in any case the only efficient method to employ was to prevent infection at the source of milk supply, and not to attempt its destruction when conveyed to the consumers.

(To be concluded.)

THE HYDROPHOBIA QUESTION.

M. LUTAUD, the editor of the *Paris Journal de Médecine* and author of a severely critical work ("M. Pasteur et la Rage") upon the Pasteurian treatment of hydrophobia, delivered a lecture on this subject on Wednesday last at Prince's Hall, Piccadilly, Lord Henry Bruce, M.P., in the chair. The lecture was delivered in English before an audience of about 200 ladies and gentlemen. M. Lutaud commenced by criticising the report of the English Commission, which he characterised as confused and inconclusive. He pointed out that the comparison made in that report between vaccination and Pasteur's method was incorrect, seeing that the former was prophylactic and the latter alleged to be curative. The Commission had personally inquired into 90 cases treated by M. Pasteur, but only 24 of these were said to have been bitten by undoubtedly rabid dogs, so that the 8 fatal cases in this number were far in excess of the usual proportion of fatalities in cases of bites of rabid dogs—viz., 5 per cent. The report had reckoned that of the 2682 cases treated at the Pasteur Institute the mortality should have been 130 instead of 40, but it ought to have been stated that only 233 of the cases were found to have been bitten by rabid animals, which should have given only a mortality of 15 if untreated. M. Lutaud contended that the Pasteurian method had increased the mortality instead of diminishing it. Before its adoption the annual average mortality in France was 30. In England and Wales the average is 43, in Austria 12, whereas in Germany for the past two years not a single case has occurred. The actual mortality in France during 1886 was 42, of which 25 had been treated by Pasteur. The introduction of the "intensive method" was alleged to have been the cause of 9 of these fatalities from paralytic rabies, and the two English cases mentioned in the Commissioner's report were detailed. M. Lutaud firmly believes that had the man been promptly treated in England before being sent to Paris, he would have been still alive; and the other case—in which the cause of death was said to be pneumonia,—was, he felt convinced, one of paralytic rabies, of which pneumonia is a feature. He concluded that the intensive method was responsible for these fatalities. Professor Horsley's experiments were inconclusive; and, indeed, all experiments where the protective inoculation is practised *before* the introduction of the virus direct, are not comparable in their results with the practice on the human subject, where the inoculation is performed *after* the virus has been introduced. The report of the English Commission had been welcomed by Pasteur's adherents as a favourable support to their views, but yet the Commission did not venture to suggest the free adoption of the method,

and to advocate the foundation of a Pasteur Institute in England. Their conclusion in favour of increased police regulation was not based on the results of Professor Horsley's experiments, but on the dictates of common sense. The lecturer solemnly declared that M. Pasteur's method was based on inaccurate experiments and fallacious conclusions, and that the method must be condemned in the interests of humanity and of science. The lecture, which was clear and concise, was frequently applauded, and a vote of thanks was heartily accorded to M. Lutaud and the chairman.

THE HOSPITAL SUNDAY FUND.

ON the 25th inst. a meeting of the Council of the Hospital Sunday Fund was held at the Mansion House to receive the report of the Committee of Distribution. The Lord Mayor presided, and among those present were Sir Sydney Waterlow, Sir J. Risdon Bennett, Dr. Sedgwick Saunders, the Rev. Canon Nisbet, Mr. Joseph Fry, &c. The total amount received this year was only a few hundreds less than that realised in 1886. The report stated that the committee recommended the payment of awards to 158 institutions, being an increase of 4 since last year, and of 53 since the first awards were made in 1873. The total amount available for distribution, after allowing sufficiently for liabilities and the usual current expenses, was £39,125. Of this, the sum of £37,525 was recommended to 108 hospitals and 50 dispensaries. Four per cent. of the total collected—viz., £1600—was set apart to purchase surgical appliances. The following were the principal awards:—Charing-cross Hospital, £939 11*s.* 8*d.*; King's College Hospital, £1354 3*s.* 4*d.*; London Hospital, £3333 6*s.* 8*d.*; Royal Free Hospital, £885 8*s.* 4*d.*; St. George's, £1875; St. Mary's, £1822 18*s.* 4*d.*; Middlesex Hospital, £1979 3*s.* 4*d.*; University College Hospital, £1510 8*s.* 4*d.*; Westminster Hospital, £987 10*s.*; Hospital for Consumption, Brompton, £1875; and Hospital for Sick Children, Great Ormond-street, £729 3*s.* 4*d.*

Sir Sydney Waterlow, in moving the adoption of the report and the payment of the awards, expressed the gratitude of the Council to the public for the increased contributions which had been given to the fund this year, especially considering the very numerous demands which had been made everywhere in this Jubilee Year. He proposed to ask the Council to authorise the distribution of £1100 more than last year. That sum would enable them to distribute on the basis of last year, although they had to include this year four more institutions, making a total of 158, among which the money had to be divided. They had also to set aside a sum of £1600 for surgical appliances, and it was gratifying to know that in this branch 1450 cases were relieved last year, at an average cost of just over £1 a case.

Mr. Joseph Fry seconded the motion, which was carried unanimously.

Resolutions were afterwards adopted conveying the thanks of the meeting to the chairman and other members of the Distribution Committee for the great labour they had undertaken, to the Lord Mayor for presiding over the Council, to the Duke of Cambridge and other noblemen and gentlemen for pleading the cause of hospitals during "Hospital Week," and to the editors of newspapers and other members of the press who had given valuable assistance.

TESTIMONIAL.—An illuminated address, with silver bowl and candlesticks of the value of £70, and a purse of 100 guineas, have recently been presented by Sir Lionel Darell, Bart., to Mr. Thomas Watts, of Frampton-on-Severn, on behalf of his old friends and patients, "as a testimony of their high regard and esteem for him personally, and in recognition of his kind and skilful attention to all who have been the subjects of his professional care during his practice amongst them for upwards of forty years." It is interesting, in relation to this, to recall the fact that nearly fifty years ago Mr. Watts's father, who then held the same practice, had given to him a complete silver tea service, and that on his death, a few years later, a sum of £300 was subscribed to found a "Watts" prize at the Medical Benevolent College. It would be pleasant indeed to believe that characteristics so helpful and so honourable to patients and doctors alike might be considered as capable of hereditary transmission and contagious extension.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

The Sanitary Condition of Cranbrook, by Dr. AIRY.—Cranbrook, in Kent, is the centre of a rural sanitary district which is essentially uninteresting from a sanitary point of view, except in so far as it has long been in a neglected state. Dr. Airy's report tells of watercourses polluted with accumulations of offensive filth, sewers broken and riddled with rat-holes, wells of doubtful purity, and such-like matters. Some of the sewage arrangements that have been contrived often cause nuisance at the outfalls; and at Frittenden a prevalence of enteric fever in 1886 was associated with excremental nuisances and polluted drinking water. But the worst of all is the fact that, notwithstanding these circumstances, Dr. Airy gathers, as the result of his conferences with the local people, that, so far as Cranbrook itself is concerned, there is very little hope of any thorough remedy being applied. Unfortunately there is throughout the district a great unwillingness to incur any expense which will show itself in the form of a sanitary rate, and so far such work as scavenging, &c., is alone to be hoped for. There are many people who, seeking rest and health, turn to Kent as the "garden of England." They had better direct their steps to such parts of the county where obvious conditions of ill-health do not prevail.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5980 births and 3937 deaths were registered during the week ending July 23rd. The annual rate of mortality in these towns, which had increased in the preceding four weeks from 17·6 to 20·7, further rose last week to 22·2. During the first three weeks of the current quarter the death-rate in these towns averaged 20·8 per 1000, and was 0·4 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 11·7 in Derby, 13·2 in Portsmouth, 14·3 in Blackburn, and 15·0 in Brighton. The rates in the other towns ranged upwards to 24·9 in Newcastle-upon-Tyne, 27·2 in Birkenhead, 32·4 in Leicester, and 36·7 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 486, 673, and 880 in the preceding three weeks, further rose last week to 1173, owing to the increased mortality from diarrhœa; they included 800 from diarrhœa, 162 from whooping-cough, 100 from measles, 54 from scarlet fever, 29 from diphtheria, 27 from "fever" (principally enteric), and only one from small-pox. These zymotic diseases caused the lowest death-rates last week in Halifax, Derby, and Brighton, and the highest rates in Leeds, Preston, and Leicester. The highest death-rates from diarrhœa occurred in Nottingham, Liverpool, London, Leeds, Preston, and Leicester; from whooping-cough in Bradford, Bolton, and Birkenhead; from measles in Manchester and Birkenhead; from scarlet fever in Blackburn; and from "fever" in Preston. Of the 29 deaths from diphtheria in the twenty-eight towns, 24 occurred in London. Small-pox caused 1 death in Sheffield, but not one in Greater London, or in any of the twenty-six other large provincial towns. No case of small-pox was under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease. The mortality from diarrhœa did not considerably exceed the average for the season. The deaths referred to diseases of the respiratory organs in London, which had been 199, 189, and 188 in the preceding three weeks, further declined last week to 174, and were 19 below the corrected average. The causes of 80, or 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Salford, Brighton, Bolton, Blackburn, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Sheffield, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·8 and 19·5 per 1000 in the preceding two weeks, further rose to 20·9 in the week ending July 23rd; this rate, however, was 1·3 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 18·7 and 19·1 in Edinburgh and Aberdeen, to 23·1 in Paisley and 23·7 in Dundee. The 523 deaths in the eight towns last week showed a further increase of 36 upon the numbers in the preceding two weeks, and included 39 which were referred to diarrhœa, 37 to whooping-cough, 9 to "fever" (typhus, enteric, or simple), 8 to diphtheria, 5 to scarlet fever, 5 to measles, and not one to small-pox; in all, 103 deaths resulted from these principal zymotic diseases, against 84 and 93 in the preceding two weeks. These 103 deaths were equal to an annual rate of 4·1 per 1000, which was 2·6 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of diarrhœa, which had increased in the previous four weeks from 10 to 30, further rose last week to 39, of which 16 occurred in Glasgow, 6 in Dundee, and 6 in Paisley. The deaths from whooping-cough, which had been 46 and 43 in the preceding two weeks, further declined last week to 37, and included 14 in Edinburgh, 10 in Glasgow, and 5 in Dundee. The 9 deaths referred to "fever" showed an increase upon the low numbers returned in recent weeks; 5 occurred in Glasgow, 2 in Edinburgh, 1 in Aberdeen, and 1 in Leith. The fatal cases of diphtheria were also more numerous, and included 2 in Edinburgh and 2 in Leith. The 5 deaths from scarlet fever were fewer than in any recent week; 4 were returned in Dundee. Three of the 5 deaths from measles occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 80, 76, and 65 in the previous three weeks, rose again last week to 77, and were 10 above the number returned in the corresponding week of last year. The causes of 74, or more than 14 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 26·6 and 27·9 per 1000 in the preceding two weeks, further rose to 29·9 in the week ending July 23rd. During the first three weeks of the current quarter the death-rate in the city averaged 28·1 per 1000, the mean rate during the same period being but 22·1 in London and 19·1 in Edinburgh. The 202 deaths in Dublin last week showed a further increase of 13 upon the numbers returned in the previous two weeks; they included 21 which were referred to measles, 21 to diarrhœa, 3 to whooping-cough, 2 to "fever" (typhus, enteric, or simple), 1 to scarlet fever, and not one either to small-pox or diphtheria. Thus the deaths resulting from these principal zymotic diseases, which had been 47 and 45 in the preceding two weeks, rose last week to 48, and exceeded the number returned in any previous week of this year; they were equal to an annual rate of 7·1 per 1000, the rates from the same diseases being 8·5 in London and 4·2 in Edinburgh. The fatal cases of measles, which had been 36 and 28 in the previous two weeks, further declined last week to 21. The deaths attributed to diarrhœa, on the other hand, rose to 21, from 3 and 12 in the preceding two weeks. The deaths from the other zymotic diseases did not materially differ from the numbers in recent weeks. The deaths of infants exceeded the number returned in any previous week of this year, and the deaths of elderly persons also showed a marked increase. Two inquest cases and 2 deaths from violence were registered; and 49, or nearly a quarter, of the deaths occurred in public institutions. The causes of 27, or more that 13 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Staff Surgeon Cecil Drake has been placed on the retired list of his rank (dated July 12th, 1887).

The following appointment has been made:—Surgeon James A. Vesey, to the *President*, for temporary service (dated August 2nd, 1887).

Correspondence.

"Audi alteram partem."

DISEASE AND MEDICAL ATTENDANCE IN WORKHOUSES.

To the Editors of THE LANCET.

SIRS,—A leader in last week's LANCET refers to an inquest held on the body of a patient, who died in the infirmary, St. George's-in-the-East, and, as one or two points in the account of the inquest require further elucidation, I trust you will grant me space for that purpose, and also to comment briefly on the article.

After the patient was admitted to the workhouse, she was warded amongst the aged and infirm, and the ward she occupied was under the supervision of a paid nurse both by day and night. During the night she got out of bed and fell near the fireplace, with her left arm on the fender. Of course there was no fire in the grate. The patient did not appear to be injured by the fall, and after being put back in bed another inmate sat by her side, and the nurse visited the ward from time to time as usual. In the morning when I saw her, she was quite able to walk about, and did not think anything of the injury, which was simply a bruise of the left arm, and not one private patient in a thousand would have called a medical man in the night to see it. As her mind was becoming affected she was removed to the infirmary, when an attack of acute senile mania supervened, and she died. During her residence in the infirmary she was seen at least twice daily by the medical officer or myself, and the former left the infirmary only two days before she died. The relative who called to inquire after her on the Monday was not allowed to see her, as I did not think it desirable for him to do so in the state of mind she was then in, and she had been visited by friends on the previous day. He, however, put too hopeful a construction on my words when he stated that I said she would be all right in a few days.

I do not see that this case affords an illustration of any want of care or attention. Had she been injured by the fall a message would have been sent immediately to the medical officer.

I will now turn to the question of additional medical advice for the inmates of Poor-law institutions, and, at the very outset, beg to express my opinion that the inmates of these institutions receive far more medical aid than most people do at their own homes, and who pay for it. You allow that we are capable men and incapable of any unkindness, but at the same time you think that another opinion might be provided by some means or another. Respecting our capabilities, I think I may say, and without fear of being considered guilty of boasting, that we are quite equal to the average medical man. For Poor-law appointments there is no lack of good candidates, and usually, though perhaps not always, the best are elected. As regards the advisability of providing further medical advice for the recipients of parochial relief, I must say that I think it a question open for discussion. I should be very sorry to stand in the way of anyone from receiving the best medical or surgical advice in a serious illness. It might be argued, and argued with very great force, that medical officers of Poor-law institutions are men of very considerable professional attainments, and fully capable of treating all cases that come under their charge. Again, in London many of the patients in workhouse infirmaries have previously derived all the benefit they can from treatment at hospitals; and should any patient require operative treatment the medical officer does not care to undertake, he can transfer the case to a hospital. Of course, consultants might be appointed, whose advice and assistance should be available when required, and for which they should receive appropriate remuneration. It would never do to allow inmates and their friends to call in medical men when they wished; such a system would upset the working of any institution, and assuredly a medical officer's berth is not such a bed of roses that anyone would wish to make it more unpleasant. We certainly might have some additional help, and I believe it would be found to answer best if given by the appointment of more junior officers. Such assistance would be an advantage to both medical officers and patients, and would

be a means of gaining experience in fields of practice particularly useful to recently qualified medical men.

During the past fifteen years or so great strides have been made in medicine and surgery, but I believe in no departments have there been more improvements than in the medical administration of our Poor-law institutions.

I am, Sirs, yours faithfully,

July 26th, 1887. ARTHUR FFLINTOFF MICKLE, M.B.

"SUBSTANTIVE *VERSUS* HONORARY RANK."

To the Editors of THE LANCET.

SIRS,—So many sensible letters, supported by your favourable comments, have appeared in THE LANCET against honorary rank for medical officers in the army, that nothing more seemed necessary to be said. Having, however, just heard from a friend that a medical contemporary supports the idea of honorary rank, and teems with letters in favour of it, I venture to suggest that the wishes of the majority of medical officers are not represented by these letters. Naturally, those wanting honorary rank write; while the contented ones remain, as a rule, quiet. But there is, I believe, no doubt that, if there were any danger of honorary rank being given to us, a large majority of the medical staff and of the Indian Medical Service would support Mr. Stanhope's statement in the House of Commons, that they had no wish for "titles so dissociated from the duties of their honourable profession," and would protest in the words of your correspondent, "Army Surgeon," against becoming "the laughing stock of the army."

I am, Sirs, yours faithfully,

S. L. DOBIE,
Surgeon-Major, 4th Madras Cavalry.

Kamptee, India, July 3rd, 1887.

VAGINAL HYSTERECTOMY.

To the Editors of THE LANCET.

SIRS,—Dr. Braithwaite's interesting paper in your issue of July 23rd contains much controversial matter. I would first congratulate him on his success, and then, briefly as possible, touch on certain of his statements as regards the best method of operating. Not having a copy of THE LANCET before me at the time of writing, I must rely on my memory, which I trust will be found accurate.

Dr. Braithwaite disapproves of the use of instruments for checking hæmorrhage from the vessels in the broad ligament, and deprecates any attempt to secure them without retroverting the uterus. My experience is quite opposed to this, and having operated on two cases, and seen a few others done, I have no hesitation in saying that with the use of properly-shaped strong forcipressure forceps with a firm catch the operation is materially shortened and bleeding quite safely controlled. In my cases the body and fundus were large, hence the broad ligaments were of a greater vertical depth, and my forceps would only clamp their lower two-thirds; but when the body is of the normal size the forceps act admirably, and the operation is less difficult. With these instruments there is no fear of any slipping of ligatures or risk of secondary hæmorrhage from their ulcerating through the coats of the vessels. Dr. Braithwaite disapproves of the use of sponges. I can only say that in my last case, which made an admirable recovery, and which was a case of cervical cancer complicated with pregnancy, I found that a soft flat sponge, folded, with a strong carbolised silk ligature tied round its middle and introduced into Douglas's cavity, was an excellent means of absorbing the blood which came from the uterine side after separating the uterus. When removed at the end of the operation, it brings the peritoneal and mucous surfaces outwards and into contact, and they soon unite; hence, in my view, as in that of many others, there is no need for suturing these surfaces. A large drainage tube with capacious holes should be inserted for a couple of days, and syringing commenced at the end of twenty-four hours, and done at least three times daily or oftener according to the amount and condition of discharge. This is very important. Dr. Braithwaite seems to contradict himself with reference to the propriety of first removing the diseased cervix. Unless the mass be large there is no need for this, as the peritoneum need not be infected in the operation with forceps, but in retro- or ante-version with ligature it may be. There are other points in the operation which I must leave to another occasion, but I feel sure Dr. Braithwaite will agree with me when I say that in the interest of patients I wish he had insisted that no one should attempt the operation without having practised it on the cadaver a few times, and without having seen it done on the living.

With regard to the indications for the operation, its mortality, and its comparison with supra-vaginal excision of the cervix, I am compelled by the most recent information to differ from him and other writers on the subject. On the matter of so-called recurrence, which really means an incomplete operation, we must all wait for time to decide as regards total extirpation; but as Schroeder's cervical excision is at best but a partial operation, and has a mortality of at the best 7 per cent., and an all-round mortality several points higher, and as recurrences have been too frequent, I think every careful surgeon would agree that the mortality is far too high for any partial proceeding, and the recurrence is what he would expect. Now, the most recent mortality results of the complete operation are *nil*—i.e., that two operators have had a series of fifteen or twenty cases without a death,—and I see no reason why experienced operators should not obtain similar results in this country; but even if the expert and all-round mortality were, with recent improved modes of operating, equal to the best results of Schroeder's operation, I should elect the complete operation, as in properly previously examined cases and those proper for the method there is far greater prospect of a permanent cure by the radical plan. To take the pathology of Ruge and Veit (which is some years old, and needs confirmation) as a basis on which to select an operation can only lead to disappointment, for we hardly ever see cases early enough to feel at all sure that we can get well above the disease; and even if it were proved to demonstration that cancer of the vaginal portion always spreads outwards to the lymphatics in the broad ligament, and rarely, or never, upwards along the canal, I hold that the complete operation would enable us to well remove the diseased parts of the broad ligaments in cases which are not too far advanced for any operation. In those extremely rare cases which are seen early enough for Schroeder's operation, there can be no comparison between it and the complete one, for these rare cases are suitable for the former and not for the latter; but in the majority of cases, as we first see them, Schroeder's operation, with its high mortality and frequent recurrence (through incompleteness) is, in my opinion, out of court. The ordinary amputation of the cervix by the écraseur and other means is only admissible in cases of papilloma, and even these have been known to return. So that in dealing with ordinary cases of cancer as we see them, whether of the vaginal portion, cervical canal, or body, it seems to me that elytro-hysterectomy is the best proceeding.—I am, Sirs, yours truly,

Grosvenor-street, W., July, 1887. H. A. REEVES.

THE THERAPEUTICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—At a meeting held last Friday by the kind permission of Dr. Milner Fothergill at his house, the following gentlemen were elected as Executive Council of the above Society, with power to add to their number:—Dr. Milner Fothergill, M.R.C.P.L.; Mr. Haward, F.R.C.S. Eng.; Dr. Stretch Dowse, F.R.C.P.E.; Dr. Prosser James, M.R.C.P.L.; Dr. Saundby, F.R.C.P.L.; Dr. Campbell; and Dr. Illingworth.

A discussion arose, after the reading of a paper on the advantages of this Society, as to the admission as members of *all* registered general practitioners; and it was finally decided that, as the basis of the Society was to be distinctly "unsectarianism," the following should be the rule for eligibility for admission: "That all qualified medical practitioners shall be eligible for membership provided that they have not already avowedly pledged themselves to any exclusive line of therapeutics." If all gentlemen, therefore, who have already sent in their names for membership, who cannot agree to this rule, will kindly write me a card withdrawing from the Society, I shall be much obliged; at the same time I trust that they will be "few and far between." It was felt by the Council that as an "unsectarian" Society it would be destructive to admit as members any holding strongly biased views with regard to therapeutics. This Society is founded for "investigation of all methods of medical treatment now existing, or which may afterwards be introduced," and therefore it stands as a reasonable pro-

position that its members should be "from bias free of every kind." It was also unanimously decided that, subject to this rule, ladies who are upon our Medical Register should be enrolled as members, and it was with much pleasure that I handed in the names of Mrs. Garrett Anderson, M.D., and Mrs. Marshall, M.D. There can be no possible objection to the presence of ladies at a Therapeutical Society, and it is a step in the right direction to admit them as a privilege due to their degrees.

Now that the Society is launched, it only remains for medical men, by joining as members, to make it a success. The subscription is placed at 10*s.* 6*d.* at present, but it was decided to raise this after the first 300 names have been sent in. The journal, of course, will not be included in the subscription, a special charge being made for it. The first meeting will take place in October, and the Council trusts that this Society will not be looked upon as a mere metropolitan one, but literally the Therapeutical Society of Great Britain. It will then take its place amongst the older societies as one of the most useful, because of its essentially practical nature.

Thanking you again for the use of your valuable columns,
I remain, Sirs, yours faithfully,

July, 1887. A. GEORGE BATEMAN, M.B., Hon. Sec.

ON THE USE OF THE THERMOPILE AND SECONDARY BATTERIES.

To the Editors of THE LANCET.

SIRS,—Messrs. Coxeter have, at my suggestion, obtained from Prague the thermopile mentioned by Professor Ogston in an article published in THE LANCET on April 30th, p. 867. The thermopile itself has, when acting properly, an electromotive force of from four to eight volts. The secondary batteries mentioned by Professor Ogston, when charged, have each an electro-motive force of two volts, and the two boxes contain four cells; therefore the whole secondary battery has also an electro-motive force of eight volts. They answer very well for the electric light and for galvano-cautery, and one box (two cells) is quite sufficient to work an induction coil, but they do not possess sufficient power to overcome a high resistance such as is experienced in performing electrolysis. When needles attached to both poles are inserted, for example, into a nævus, no doubt the current strength would be sufficient, for the resistance then experienced is very low; but if only one pole is used for the needle—say, the positive pole,—when every endeavour is made to prevent a slough, and an electrode is attached to the negative pole and placed on some indifferent part of the body, then the electro-motive force is not sufficient to effectually overcome the resistance. If we take the resistance of the body with a needle attached to one pole beneath the skin at 500 ohms, we should only have a current strength of 16 milliampères. In the electrolysis of nævi with the needles attached to one pole we have generally found that we have been obliged to use a current strength of 40 milliampères to produce any destruction of the growth; and, of course, with the electrolysis of uterine fibroids, in which M. Apostoli is said to use a current strength of from 100 to 300 milliampères, the secondary battery, as described by Professor Ogston, would be of very little use. Again, with the employment of the constant current in the treatment of such an affection as sciatica, when both poles are applied to the skin the secondary batteries would give a current strength of about 8 milliampères, and we have found that the best effects are derived from a current of from 10 to 15. It will therefore be seen that for electrolysis and ordinary galvanising it will be more efficacious to still employ primary batteries containing a large number of cells; but for electric lighting, heating small cauteries, and for working faradaic coils, the secondary batteries, as charged by the thermopile, are, no doubt, "a convenient means of producing electricity for medical and surgical purposes."

I am, Sirs, yours obediently,

W. E. STEAVENSON, M.D. Cantab., M.R.C.P.,
In charge of the Electrical Department at
July, 1887. St. Bartholomew's Hospital.

MOSQUITOES are said to be giving trouble to some of the residents of Camberwell and its vicinity. A man who was severely bitten by these pests thought it necessary to seek advice at St. Thomas's Hospital.

LIVERPOOL.

(*From our own Correspondent.*)

THE REBUILDING OF THE ROYAL INFIRMARY.

THE removal of the present buildings of the Royal Infirmary and the erection of a new structure on its site are matters of more than local interest. The institution has existed since 1749. The first infirmary, which was erected in that year, was removed in 1836, and replaced by the present structure, which was commenced in 1821 and completed in 1824. The institution, therefore, possesses some antiquarian interest. The present infirmary has afforded clinical instruction to thousands of medical practitioners, past and present, in all parts of the world; while the re-erection of this most important provincial hospital is a matter of interest to all readers of THE LANCET.

THE OLD INFIRMARY.

Proceedings were taken in 1745 to found "an infirmary for the sick and hurt," but a threatened invasion prevented the completion of this, the first medical charity in Liverpool, until four years later. Excellent views are preserved of this building, which was, and must ever remain, memorable as being the scene of Henry Park's first most successful excision of the knee joint. A less creditable circumstance in connexion with this infirmary is that its medical staff constituted an examining board for African surgeons, the name given to the surgeons on board slave ships, for which Liverpool had at that time a most unenviable reputation.

THE PRESENT INFIRMARY.

Partly owing to town improvements, partly to the fact of the old infirmary being inadequate for its purpose, the present one was erected on a site which was then in the eastern suburbs of the town. From the very first its internal arrangements were faulty. As an illustration of this, it may be mentioned that the original plan contained no stairs at all, and these had to be introduced as an after-thought. Since it was first erected the building has been altered, patched up, and added to repeatedly, the result being to create a huge rambling edifice, most inconvenient to everybody connected with it. Still its complete removal will cause a shade of regret to many an old student who may have pleasant recollections of former days spent within its walls.

THE PROPOSED NEW INFIRMARY.

After due deliberation it was decided that the present site should be retained, some additional adjoining ground having been also acquired and added to it. This latter is being rapidly cleared of the old houses which covered it, and the infirmary itself is in process of demolition. Temporary wards have been erected, and additional accommodation provided in the immediate neighbourhood. Mr. Alfred Waterhouse, R.A., the architect, has produced a general design, which will be at once useful and effective, without being unnecessarily ornate. He has selected the dark Liverpool brick for his material, with terra-cotta facings and ornaments, the effect of which, as seen in the recently erected chemical laboratories, is very rich. The executive department will face Pembroke-place (a leading thoroughfare), and contain all the offices, living rooms, and commissariat department. The general plan is that of a long ridge or backbone, this being a general means of access. From one side of this run off three long pavilions; from the other, two towers and a short central pavilion, by means of which last communication is effected with the executive department. The chief features of the interior will be the use of coloured glazed bricks for the walls, of fireproof cement covered with oak parquet for the floors, and of cement ceilings. By this means every portion of each ward will present an impenetrable surface, always capable of easy cleaning. The ventilation will be of the simplest description, reliance being almost entirely placed upon the windows. The wards will be heated partly by steam coils and partly by central open fireplaces, so as to combine the advantages of both systems. The supervision of the drainage has been handed over to the special care of Mr. Rogers Field, a guarantee in itself that this important department will be of the most perfect character. The members of the Building Committee have spared no pains to ensure the success of the new building. They have visited the more recent hospitals to obtain all possible information on the

most modern questions, and have had the active and hearty co-operation of the medical staff in their labours. Mr. Mitchell Banks has from the very first devoted himself almost unremittingly to the plans and organisation generally, in which Dr. Alexander Davidson has also lent great help. A description of the proposed new building, with a bird's-eye view engraving, are given in the *Building News* of July 1st.

HOSPITAL SUNDAY AND SATURDAY FUND.

The following sums have been awarded by the Hospital Sunday Committee to the various medical charities:—Royal Infirmary, £2187 10*s.*; Royal Southern Hospital, £1312 10*s.*; Northern Hospital, £1137 10*s.*; Dispensaries, £612 10*s.*; District Nursing Society, £612 10*s.*; Ladies' Charity—Lying-in Hospital, £350; Children's Infirmary, £525; Eye and Ear Infirmary, £437 10*s.*; Homœopathic Dispensaries, £175; Hospital for Cancer, £87 10*s.*; Hospital for Consumption and Diseases of the Chest, £262 10*s.*; Stanley Hospital, £437 10*s.*; Dental Hospital, £21 17*s.* 6*d.*; St. George's Hospital, £21 17*s.* 6*d.*; St. Paul's Eye and Ear Infirmary, £131 5*s.*; Convalescent Hospital, Woolton, £175; Hospital for Women, Shaw-street, £175; Home for Incurables, £87 10*s.*: total, £8750. Amongst the list of the institutions that used to be included in the amount voted was the Netherfield-road Hospital. That institution, however, is now under the management of the Corporation, and the Home for Incurables has taken its place in the list. In addition to the amounts mentioned above the committee resolved to pay over to the treasurer of the Hospital for Women, Shaw-street, the amount of £185. That institution shared the Fund for 1886, but which had been held over.

Liverpool, July 26th.

MANCHESTER.

(*From our own Correspondent.*)

THE BRITISH ASSOCIATION.

THE final arrangements in connexion with the approaching meeting of the British Association, to be held here next month, are fast being completed, and it is hoped that it will prove to be one of the most successful gatherings the Association has ever had. The support both of private individuals and of public bodies which is being accorded it bids fair to make this hope fully realised. A guarantee fund of upwards of £10,000 has been raised, conversaziones will be held at the Town Hall and at the Jubilee Exhibitions, and more than a dozen excursions have been arranged for, amongst those who have invited the Association to their seats being the Duke of Devonshire and the Duke of Westminster. The sections, eight in number, into which the work is divided all promise plenty of material for consideration, and the biological section will be of special interest. More than a hundred acceptances have been received from distinguished men from all parts of Europe and America, and it is thought not impossible that the meeting may be graced by the presence of a distinguished member, the Emperor of Brazil, who is at present on a visit to Europe. It is twenty-six years since the last meeting of the Association was held in Manchester.

VOLUNTEER MEDICAL STAFF CORPS.

The first annual inspection of the Manchester division of the Volunteer Medical Staff Corps was held on the 16th inst., when Deputy Surgeon-General A. Bradshaw (the principal medical officer of the northern district) was the inspecting officer, and expressed himself well pleased with the manner in which the men went through the various drills and treated the supposed "cases" on which they had to practise. The enrolled strength of the corps is fifty-eight, and much credit is due to Surgeon Crockwell (who is in command) for the satisfactory manner in which the men acquitted themselves. On the same day the Artillery Volunteers were inspected by Colonel Maclaverty, and two "stretcher detachments" marched past at the rear of the brigade, the latter having recently been through the prescribed ambulance course under the instruction of Drs. Tomkins and Daly, surgeons to the regiment.

OPEN SPACES, ETC.

Mr. Herbert Philips, whose zeal in the matter of open spaces is beyond all praise, is making earnest appeal for more assistance from the well-to-do in furtherance of these objects. The Society of which he is chairman has spent £2000 during the past year in laying out and providing the necessary appliances for gymnasia and recreation grounds in various parts of the city, but, like many other institutions, it is cramped for want of funds. It is gratifying to see that the Corporation are also alive to the importance of this matter, and it is hoped that ere long the large space around St. Michael's church may be utilised much more fully than at present as a playground, &c. The "children's holiday" fund committee have issued their annual appeal for help in sending children out from the slums into the country for a few weeks each. Already this summer some 500 have been thus sent into the surrounding country, and this good work is only limited by the amount of money at disposal.

SCARCITY OF WATER.

The long-continued drought is beginning to assume somewhat serious aspects. Upwards of twenty million gallons of water are required daily for the needs of this great population, and the present quantity in store is running dangerously low. The supply is now cut off between the hours of 8 P.M. and 5 A.M., and economy of consumption is earnestly urged upon everyone. The state of the river Irwell this dry season is giving rise to loud and bitter complaint. The fact is, the stream is little better than an open sewer, and gives off, in places, the most vile smells. Mr. Alderman Walmsley, one of the medical representatives on the Salford Corporation, has addressed some very strong letters to the papers, in which he says the stench in the neighbourhood of the Broughton Cricket-ground is positively dangerous. This is particularly hard on the Salford residents, seeing how much Salford herself has done to prevent the fouling of the river. A boy who recently fell in was rescued from drowning, but died within two days, and a verdict was returned that he died from poisoning, "the effects of the filthy water of the Irwell." *Verb. sap.*

ROYAL INFIRMARY.

The annual meeting of the Royal Infirmary is to be held on the 28th, and in the abstract of the report now issued it is stated that ten years ago each occupied bed cost £74 per annum, whilst in the past year it was only £42. But it is somewhat fallacious to pick out any two years for the purposes of comparison; it would be much better to take, say, the average of the past ten years, since the new management came into operation, and compare it with the average of the preceding ten years. The in-patients under treatment during the past year have been 4508 at the infirmary, 1279 at the convalescent hospital, and 1755 in the fever hospital, the cost per bed at this latter institution still appears to be high even for an infectious hospital.

NEW FEVER HOSPITAL.

The proposal of the Salford Corporation to acquire land at Hope for the erection of a new Fever Hospital in place of the one soon to be removed at Cross-lane, is giving rise to much opposition; and an organised movement to prevent if possible its erection on this site is in progress.

July 26th.

NORTHERN COUNTIES NOTES.

(*From our own Correspondent.*)

ACCIDENTS IN NORTHERN MINES.

THE annual reports of the inspectors of mines to the Home Secretary were issued yesterday morning. Mr. James Willis, reporting on the Newcastle-on-Tyne district, which embraces the north part of the county of Durham, the counties of Northumberland and Cumberland, and detached parts of Lancashire, shows that the number of persons employed was 52,548, as against 53,011 in 1885. There had been thirty-six fatal accidents in the course of the year, each occasioning the loss of one life. This is a larger number of fatal accidents than the preceding years, but the loss of life is very much less. Mr. Willis shows that the accident figures compare favourably with those of the United Kingdom. Mr. Thomas Bell, inspector of the Durham district, which embraces South Durham, Westmoreland, and the North Riding of Yorkshire, reports that

there has been a falling off in the number of persons employed to the extent of 1581. There were seventy-four fatal accidents during the year, fifty-five of them in the coal mines, seventeen at the ironstone, and two in the metalliferous mines. In the previous year there were the same number of fatal accidents, when, however, thirteen occurred in the coal mines, ten at the ironstone, and one in the metalliferous mines. The death-rate was higher in the aggregate than in the preceding year, there having been eighty-three lives lost in the coal mines, seventeen at the ironstone, and two at the metalliferous mines. This increase was due to the explosion at the Elenore pit last December, and if the loss of life from that accident were deducted the death-rate would be the lowest in any year during the continuance of the present Acts.

POISONING BY PHOSPHORUS.

An inquest was held last week in Newcastle on the body of a young married woman, who, after a quarrel, purchased eight boxes of matches and swallowed an infusion she had made of the heads. She never complained for about four days, when, her symptoms becoming acute, Mr. Foggin was called in, and she confessed to the act, surviving nearly seven days.

THE NOTIFICATION OF MEASLES.

At a meeting of the Newcastle Sanitary Committee held last week, it was stated that a serious epidemic of measles at present existed in the city, and after some discussion the following motion was carried by ten votes to five: "That the Council at its next meeting be requested to take the necessary steps for the notification of measles similar to the notification of other infectious diseases."

DEATH OF DR. LUCIUS HOLLAND OF NEWCASTLE.

I regret to announce that another active and well-known practitioner in this city, Dr. Lucius Holland, has fallen out of the ranks. Dr. Holland died at his residence in this city on Tuesday morning last. For a short time he had suffered from sore throat, and had been confined to his house, but within the last few days before his death the affection assumed a very grave and ulcerated appearance, causing his strength to give way rapidly. He was attended by Drs. Scott and Barkus. Dr. Holland, who had nearly reached his forty-fourth year, was born at St. Ives, and was the son of a Presbyterian minister there, he himself being originally destined to enter the same ministry; and he studied at the Theological College of English Presbyterians in London, under the late Dr. Lorimer. Some scruples precluded Dr. Holland from following theology, and he took to medicine, and finished a very distinguished course as a student at Aberdeen, where he graduated, and ultimately became an M.D. He came to Newcastle about twelve or thirteen years ago, and commenced private practice. He was one of the physicians to the Newcastle Infirmary, and had charge of the aural department in that institution, where he also lectured on Aural Surgery. Dr. Holland has left a wife and two young children to mourn their loss.

Newcastle-on-Tyne, July 26th.

DUBLIN.

(From our own Correspondent.)

THE CONJOINT SCHEME BETWEEN THE APOTHECARIES' HALL AND THE COLLEGE OF SURGEONS.

AT last the dual scheme proposed by Sir Charles A. Cameron of a combination between the Royal College of Surgeons with the Apothecaries' Hall, as well as with the College of Physicians, has become an accomplished fact. The College of Surgeons will appoint two examiners in Surgery, two in Ophthalmic Surgery, two in Anatomy, two in Physiology, one examiner in Midwifery, one in Chemistry, and one in Physics. The Apothecaries' Hall will appoint two examiners in Medicine, two in Pharmacy, two in Materia Medica, two in Forensic Medicine and Hygiene, one examiner in Midwifery, one in Chemistry, and one in Physics. To qualify as examiners in Medicine and Surgery, candidates for those offices must be clinical physicians and surgeons of five years' standing; while the examiners in Midwifery are to be masters or ex-masters or assistants or ex-assistants of lying-in hospitals. Each body pays its own examiners and charges its own fee for diploma. It is probable that the Apothecaries' Hall will charge £6 for their diploma. I am in a position to state that the Council of the Royal College of Surgeons have resolved to confer the Honorary Fellowship of their College upon the following gentlemen—viz., Sir G. Macleod (of Scotland), Messrs. C. Macnamara, Heath, and Erichsen (of London).

BRITISH MEDICAL ASSOCIATION: DUBLIN MEETING.

The meeting to be held next week in Dublin is regarded with considerable interest; and as the place is so central and convenient to a large number of the members of the Association, it is expected that it will be well attended. The President-elect will be Dr. Banks, Regius Professor of Physic in the University of Dublin; and there will be an address in Medicine given by Dr. Gairdner; one in Surgery, by Mr. Edward Hamilton; and in Public Medicine, by Rev. S. Haughton. There will be eight sections and two sub-sections—viz., Medicine, Surgery, Obstetric Medicine, Therapeutics and Pharmacology, Pathology, Public Medicine, Psychology, and Ophthalmology; the sub-sections being Otology, Laryngology, and Rhinology. The meetings will take place and the addresses will be delivered in Trinity College. In the Medical Section there will be a special discussion on the different kinds of Aphasia, introduced by Dr. Charlton Bastian. In the Section of Surgery there will be a discussion on the Radical Cure of Hernia. In Obstetric Medicine there will be two subjects for discussion—viz., on the Prevention of Puerperal Fever, and on the Management of Anterior and Posterior Displacements of the Uterus. The special subject for debate in the Section of Therapeutics and Pharmacology will be the Therapeutics of the Uric Acid Diathesis, which will be introduced by Dr. Burney Yeo; in the Section of Pathology, the Pathology of Empyema and the Etiology of Chlorosis; while the subjects for discussion in the Section of Public Medicine include the Influence of Modern Preventive Measures on the Prevalence of Infective Diseases; and How to deal with the Insanitary Property now occupied by Artisans and Labourers. The latter will be introduced by Sir Charles Cameron, medical officer of health for Dublin. The other subjects for discussion will be Nervous Disorders following the use of Anæsthetics, and on Private Treatment *versus* Asylum Treatment, in the Section of Psychology; the Etiology and Treatment of Convergent Concomitant Strabismus, in the Section of Ophthalmology; on Tinnitus Aurium in the Section of Otology; and on Phthisis of the Larynx, and the Reflex Neuroses of the Naso-pharynx, in the Sub-section of Laryngology and Rhinology. Saturday will be, as usual, the day selected for excursions to various places of interest.

DUBLIN MAIN DRAINAGE.

At a meeting of the Corporation of Dublin last Monday, it was moved that a committee should be appointed to inquire into the advisability of dealing with the main drainage question by means of intercepting sewers only, in connexion with some system of purification. Also that the Council sanction an expenditure of a sum of money, not to exceed £200, for the purpose of securing every information as to the working of existing intercepting and purification schemes. It is thought the proposed work can be carried out for £150,000.

OUTBREAK OF MEASLES IN DUBLIN.

This disease being still very prevalent in Dublin, Sir C. Cameron, medical officer of health, in a recent communication, urges the working classes to remove their children to the city hospitals, and also to apply for disinfectants to the authorities.

DUBLIN HOSPITALS BILL.

This Bill, which has been introduced by some of the Nationalist members, has, it is believed, little chance of becoming law. As a contemporary points out, it is intended as an attack on the Richmond Hospital, which has done good work, and I may add it is proposed to utilise the grant of £8000 which the Richmond Hospital at present receives to augment the funds of the Mater Misericordiæ Hospital. The closing of the Lock Hospital—a most valuable institution,—as contemplated by the Bill, and the injury it would inflict, if it became law, on other institutions, will no doubt cause it to be strongly opposed. As the Bill most probably will be blocked, it is not necessary for the present to refer at any considerable length to the subject.

Dublin, July 28th.

MEMORIAL PORTRAITS OF DR. WILSON FOX.

Second List.

H. R. and I. H. the Duchess of Edinburgh...	£10	10	0	Dr. Grailly Hewitt	£2	2	0
*Dr. Adey, St. Leonards...	2	2	0	Mrs. Grailly Hewitt	2	2	0
Thos. Ashton, Esq.	10	10	0	Dr. Hollings	2	2	0
Dr. Bastian	2	2	0	W. D. Howard, Esq. ...	2	2	0
Dr. Lionel Beale...	2	2	0	J. E. Howard, Esq.	2	2	0
Dr. Beddoe Clifton	1	1	0	Dr. J. Hunt...	1	1	0
E. Bell, Esq., Bradford ...	5	0	0	S. J. Hutchinson, Esq. ...	2	2	0
Dr. H. J. Benham	1	1	0	J. B. Jessett, Esq.	1	1	0
Dr. Bowles, Folkestone ...	2	2	0	H. W. Kiallmark, Esq. ...	1	1	0
Miss Campbell of Garscube	2	0	0	Dr. Wickham Legg	2	2	0
Dr. T. A. Carter...	2	2	0	Dr. Madge	1	1	0
Dr. J. Chalmers...	1	1	0	Miss Murray-Hickson ...	2	2	0
Dr. Church	1	1	0	Dr. Nash	1	1	0
Dr. Sinclair, Coghill... ...	1	1	0	Sir Joseph Pease, Bart. ...	5	5	0
Dr. H. Colgate, Eastbourne	2	2	0	Dr. W. S. Playfair	2	2	0
Dr. D. A. Davies, Swansea	0	10	6	Dr. Douglas Powell	2	2	0
Dr. Langdon Down... ...	1	1	0	Dr. Pryce Jones...	2	2	0
Sir Dyce Duckworth, M.D.	2	2	0	R. Quain, Esq.	5	0	0
C. W. Evans, Esq.	0	10	6	Dr. W. Rickards...	2	2	0
Dr. Falls, Bournemouth...	1	1	0	Dr. Ridge-Jones...	2	2	0
*C. H. Fox, Esq....	10	0	0	Dr. Siordet	2	2	0
*Henry Fox, Esq., and Sisters	10	0	0	Dr. F. Semon	2	2	0
*Thomas Fox, Esq.	1	1	0	Dr. Snow, Bournemouth	2	2	0
*Miss S. A. Fox	5	5	0	H. Symonds, Esq., Oxford	1	0	0
Dr. Frank	5	5	0	Dr. J. Williams	2	2	0
Dr. Henry Green	2	2	0	Dr. Wood	10	10	0
†Dr. Goodhart	1	1	0	H. Wood, Esq.	10	10	0
Miss Hammill	1	1	0	Mrs. H. Wood	10	10	0
				The Misses Wood	10	10	0
				"B. W. W."...	10	0	0
				"Friendship"	10	0	0
				"A Debt of Gratitude" ...	50	0	0

* For the Replicas. † For the College of Physicians Replica.

W. R. Gowers, M.D., 50, Queen Anne-street; T. Barlow, M.D., 10, Wimpole-street, hon. secs., by whom further contributions will be gratefully received.

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary Comitia of the College of Physicians was held on the 28th inst., Sir W. Jenner, Bart., President, in the chair. The question whether a medical officer to an institution, who had to dispense medicine in that capacity, could be eligible for the Membership of the College was discussed; but no decision was arrived at.

A communication was read from the Home Secretary, conveying Her Majesty's thanks to the College for their address.

A communication was read from the General Medical Council enumerating the titles registrable under the Act of 1886, and it was announced that the list had been amended to include the College licence.

A letter from the Councils of King's College and University College, enclosing a copy of their draft petition to the Crown, was read, and referred to the Committee of Delegates.

On the recommendation of the Council the Baly medal was awarded to Dr. Ferrier.

The reports of the Finance and Library Committees and of the Curators of the Museum were read and adopted.

A report from the Committee of Management, containing recommendations as to the examination in Public Health and other matters relating to the regulations of the Conjoint Board, was read, and after some discussion adopted

The report of the Leprosy Committee was read and adopted, and it was directed to be sent to the Colonial Secretary. The report stated that if leprosy contained elements of contagion, it was not more to be dreaded than syphilis, but that it was desirable that the subject should be again investigated; and it was recommended that the Government should undertake such investigation as the College should direct.

The following Fellows were elected to the undermentioned offices:—Censors: Alfred Baring Garrod, M.D.; John Syer Bristowe, M.D.; James Andrew, M.D.; Peter Wallwork Latham, M.D. Treasurer: Sir Dyce Duckworth, M.D. Registrar: Sir Henry Pitman, M.D. Harveian Librarian: William Munk, M.D. Assistant Registrar: Edward Liveing, M.D. Curators of the Museum: William Wegg, M.D.; Lionel Smith Beale, M.B.; Henry Charlton Bastian, M.D.; John Curnow, M.D.

GUY'S HOSPITAL.—The library of this hospital will be closed on Saturday, the 6th of August, at 3 P.M., and reopened on Monday, August 29th, at 9.30 A.M

Medical News.

SOCIETY OF APOTHECARIES.—The following gentlemen passed the Primary Examination on July 7th:—

Fullard, John, Queen's College, Birmingham.
Johnson, Philip, St. Bartholomew's Hospital.
Hildyard, Nathaniel, University College.
Tyson, Edward, St. Bartholomew's Hospital.

The following gentlemen passed their Examination in the Science and Practice of Surgery on July 14th:—

Brennan, Joseph Richard Mary, Owens College, Manchester.
Haviland, Frank Papillon, St. George's Hospital.
How, George Bradley, Owens College, Manchester.
Samman, Charles Thomas, London Hospital.

The following gentlemen, having satisfied the Court of Examiners as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates entitling them to practise as Licentiates of the Society on July 20th:—

Baldwin, Henry Clifford, Lockwood, Huddersfield.
Brennan, Joseph Richard Mary, Congleton, Cheshire.
Bryett, Lewis Thomas Fraser, Girdler's-road, West Kensington.
Caley, William Birch, Stanley-road, Liverpool.
Cooper, Henry C. Evans, Myrtle Cottage, Southall, Middlesex.
Greeves, Thomas Neville, South-hill Park, Hampstead.
Powell, Herbert Edward, Battersea-park-road, S.W.
Watkins, Frank Augustus, Stowe Park, Newport, Mon.

THE library of the Royal Medical and Chirurgical Society will be closed during the month of August.

THE Tavistock Cottage Hospital was formally opened on the 25th inst.

AT Canterbury, on the 27th inst., a bazaar was opened in aid of the funds of the Kent and Canterbury Hospital, an institution which is now about £1500 in debt.

A GENTLEMAN of Somerset, who does not wish his name divulged, has increased his gift of £500 to the Extension Fund of the Taunton and Somerset Hospital to £5000.

ON the 21st inst. a conversazione in connexion with the London School of Dental Surgery was held in the rooms of the Medical Society of London, Chandos-street.

PRESENTATION.—Dr. C. J. White has been presented with a silver salver, a purse containing £70, and an illuminated scroll, on the occasion of his leaving Snodland, after practising in that place for seventeen years.

ON the 23rd inst. the managers of the Metropolitan Asylum District made their annual visitation and inspection of the Caterham Asylum for Imbeciles. The result of the inspection was reported to be satisfactory.

AT Finedon, near Wellingborough, a large number of children have been poisoned by fried fish. Some of the sufferers are not yet out of danger, but it is believed that in all the cases fatal results will be averted.

THE Managing Committee of the Birmingham Queen's Hospital have issued an appeal to the public for £10,000, half of which it is proposed to expend on an improvement scheme.

ON the 21st inst. Mr. T. H. Bartleet, the Ingleby lecturer for the year, gave a lecture at Queen's College, Birmingham, on the "Surgical Treatment of the Lower Bowel." The chair was occupied by Mr. O. Pemberton.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.—On the 21st inst., the tenth block of houses for the accommodation of patients at this institution was opened by Princess Beatrice. The new building, which has been erected at a cost of £10,000, brings up the entire hospital accommodation to 120 beds.

DEATH UNDER CHLOROFORM.—A death occurred at the Queen's Hospital, Birmingham, on the 24th inst. during the administration of chloroform to a girl aged seventeen who was about to have an abscess opened. At the post-mortem examination the heart was found structurally healthy, but feeble. A verdict of "Death by misadventure" was returned.

PHARMACEUTICAL SOCIETY.—At a recent meeting of the Board of Examiners appointed under the provisions of the Pharmacy Acts to examine persons desirous of carrying on the business of pharmaceutical chemists and chemists and druggists, thirteen candidates were certified for registration as pharmaceutical chemists, and ninety-one as chemists and druggists.

MR. JAMES B. BAILEY, resident librarian of the Royal Medical and Chirurgical Society, has been appointed to the librarianship of the Royal College of Surgeons.

WATER SUPPLY.—Viscount Cranbrook has presented a petition to the House of Lords, and Sir Robert Fowler, Bart., to the House of Commons, from the Water Consumers' Association, calling attention to the recommendations of the Royal Commission of 1868-74 on the Pollution of Rivers, in connexion with the present deficiency of water in many districts, its impurity, and the injurious effects of its hardness as now generally supplied.

THE Italian War Office, preparatory to the military operations impending on the Abyssinian frontier, has established three floating hospitals, each with its medical staff and relative equipment. One of these is to lie off Massowah; the other two will ply between that port and Italy for the transport of the sick and wounded. The hospital system ensures the patient being under the same physician or surgeon from the beginning to the end of his illness.

CITY OF LONDON LYING-IN HOSPITAL.—At a meeting of the Committee of Management, held on Wednesday last, the medical officer, in his monthly report, drew attention to the very satisfactory results achieved in the hospital during the past twelve months. Since that time, there having been 331 deliveries in the hospital without a maternal death, although several cases had caused considerable anxiety, there had not been a single case of septicæmia. This, he considered, most gratifying, as such good fortune had not attended the hospital for many years. The last death occurred early in May, 1886.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—At the monthly meeting of the members of this Association on the 20th inst., a communication was read from the Manchester and Salford Sanitary Association suggesting further co-operation among local authorities between whose districts traffic in milk was carried on. Some discussion followed, and a committee was eventually appointed to consider the matter. A resolution was then adopted, on the motion of Mr. Vacher, approving of the proposed federation of Societies of Medical Officers of Health. Dr. H. H. Vernon afterwards delivered an address on the "Practical Results of Sixteen Years' Sanitary Work in Southport."

MEDICAL NOTES IN PARLIAMENT.

Coroner's Bill.

IN the House of Lords on the 21st inst., the Lord Chancellor moved the second reading of this Bill which, he said, was simply a measure of consolidation.—Lord Herschell said he hoped that with this Consolidation Bill the subject of the amendment of the law would not be lost sight of.—The Earl of Selborne, referring to the mode of electing coroners as requiring amendment, observed that as the freeholders of a county elected a coroner, there was a long and expensive canvass, and he knew for certain that the usefulness of some coroners had been permanently injured by the embarrassments into which they had fallen in consequence.—Viscount Cross remarked that when he had the honour of being at the Home Office he brought in a Bill dealing with coroners' elections. He knew the enormous expense of such contests in Lancashire, and he believed that it had seriously affected the usefulness of those offices. He for one would wish to see some other mode of election, but the first step to reform would be the consolidation of the law.—The Bill was read a second time.

Sanitary Condition of Margate.

In the House of Commons, Mr. S. Leighton asked the President of the Local Government Board whether he proposed to take any action in consequence of the official report of Dr. Page to the Local Government Board, stating that "the Town Council of Margate continues in default in not providing for the pressing (sanitary) requirements of their district;" and that "the infant mortality in Margate has during the last five years been 170 per 1000, whereas the infant mortality of the rest of England is 142 per 1000;" and whether it would be possible to provide for the periodical publication of reports on the sanitary condition of other towns by independent medical inspectors of the Local Government Board.—Mr. Ritchie, in reply, stated that the Board had sent copies of the report to the Town Council and requested that they would at once give it their serious consideration and inform the Board of the action which they proposed to take with regard to the matters to which it referred. The reports of the Board's medical inspectors on the sanitary condition of districts inspected by them were usually printed, and when it was considered expedient they were placed on sale. When a report was in print and not on sale, the Board was always willing to supply copies to persons interested.

Brompton Cemetery.

In reply to Sir A. Borthwick, Mr. Plunket stated that the total burials in Brompton Cemetery up to February last were 135,617, and the yearly average of the last three years was in round numbers 5000. Under the Acts relating to intramural interments the Secretary of State was the authority who decided on the closing of burial grounds, but special provision was made for the keeping open of Brompton Cemetery, subject to rules and provisions laid down by the Home Office. He could not admit that any necessity had been shown for closing Brompton Cemetery.—Sir A. Borthwick gave notice that on an early occasion he would call attention to the subject.

Compulsory Vaccination.

On the 22nd inst., the House being in Committee of Supply, on the vote for the Local Government Board coming under consideration, Mr. A. O'Connor moved its reduction by £16,500, being the amount allocated for public vaccinators. He complained that the system of compulsory vaccination was unfairly administered and had been proved to be a failure, and he especially objected to the system of "rewards" for successful operations.—Dr. Farquharson was strongly in favour of the compulsory system, which had greatly improved the efficiency of vaccination, and thought the system of "rewards" ought to be extended to Scotland and Ireland.—Mr. Picton, Sir J. Pease, and Dr. Clark objected to compulsion, and Mr. Whitbread, who warned the Government that the anti-vaccination movement was spreading, suggested the appointment of a Royal Commission, which he thought would be the best means of laying before the public the new information on the question.—Mr. Ritchie admitted with regret that the opposition to the vaccination laws was not diminishing, but he did not think the number of anti-vaccinators was largely increasing. But he complained of the gross misrepresentations which where disseminated among the non-informed portion of the community. To illustrate the advantages of the compulsory system, he quoted statistics to show that from 1847 to 1853, before vaccination was compulsory, the death-rate from small-pox was 1617 per 1,000,000, but from 1854 to 1871, when it was compulsory, although inefficiently performed, the rate decreased to 817 per 1,000,000, while in 1872 the number of deaths had gone down to 323 per 1,000,000, and it was calculated, he said, that from 1853 to 1880 no fewer than 22,000 children had been saved by vaccination.—Mr. A. M'Arthur, Sir U. Kay-Shuttleworth, Dr. M'Donald, and other members also spoke, and the amendment was negatived on a division by 196 to 66. Ultimately, after a series of interrogatories had been put to Mr. Ritchie by Mr. Pickersgill and Dr. Tanner, the vote was agreed to.

The River Lea.

Mr. Ritchie informed Captain Colomb that the Local Government Board had been in communication with the West Ham Town Council on the subject of the insanitary condition of the River Lea. The Board considered that further inquiries into the matter should be made, and one of their inspectors would attend the meeting of the West Ham Council on Thursday next.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALEXANDER, ADOLPHUS B., L.D.S. R.C.S.Eng., has been appointed Dental Surgeon to the London Throat Hospital.

ANWYL, H. J. N., has been appointed Senior Assistant Medical Officer to the Kent County Asylum, Chartham, near Canterbury, vice E. W. White, resigned.

BROCKWAY, A. B., M.R.C.S., has been appointed Resident Clinical Assistant to the South-Eastern Hospital of the Metropolitan Asylums Board at New Cross.

BRUSHFIELD, THOS., M.A., M.B.Cantab., M.R.C.S., has been appointed Second Assistant Medical Officer to the Kent County Lunatic Asylum, Chartham, Canterbury.

COWAN, FREDERIC S., L.R.C.P.Lond., M.R.C.S., has been reappointed Honorary Medical Officer to the Royal United Hospital, Bath.

CRADDOCK, SAMUEL, M.R.C.S., L.S.A., has been reappointed Honorary Medical Officer to the Royal United Hospital, Bath.

DYER, BERNARD, has been appointed Analyst for the City of Truro.

ELLIOTT, GEORGE H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Second District of the Westbourne Union.

FIELD, ERNEST, M.D.Aber., M.R.C.S., has been reappointed Honorary Medical Officer to the Royal United Hospital, Bath.

GRIFFITH, THOMAS WARDROP, M.B., C.M.Aber., has been elected Professor of Anatomy in the Medical Department of the Yorkshire College, Leeds.

HARLOCK, H., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the Third District of the Westbourne Union.

LEIGH, JOHN D., M.B., C.M.Ed., has been appointed Assistant Medical Officer for the Workhouse of the Township of Toxteth-park.

LONGMAN, ARTHUR, M.R.C.S., L.S.A., has been appointed Medical Officer for the Bishopstone District of the Wilton Union.

MCGILL, ARTHUR F., F.R.C.S.Eng., has been appointed Professor of Surgery in the Medical Department of the Yorkshire College, Leeds.

MORRISON, J. T. J., B.A., M.B., B.C.Cantab., F.R.C.S. Eng., has been appointed Casualty Surgeon to the Queen's Hospital, Birmingham, vice Marsh, appointed Honorary Surgeon.

REID, IRVINE K., M.D., C.M.Aber., has been appointed Medical Officer in the Government Medical Service of British Guiana.

ROBSON, MAYO, F.R.C.S.Eng., has been appointed Lecturer in Practical Surgery in the Medical Department of the Yorkshire College, Leeds.

SHARP, J. A., L.R.C.P.Lond., M.R.C.S., has been appointed Honorary Surgeon to the Derby Infirmary, vice Bolman, resigned.

SPURGIN, WILLIAM H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Schools at Flimby of the Cockermouth Union.

TAYLOR, ALFRED E., M.B., B.S.Lond, M.R.C.S., has been appointed Surgical Registrar to Westminster Hospital.

TIFFEN, C. J., M.D., C.M.Ed., has been appointed Medical Officer for the Wigton District and the Workhouse of the Wigton Union.

VOELCKER, JOHN A., has been appointed Analyst for the Borough of Bedford.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

DIOCESE OF NEW WESTMINSTER, British Columbia.—Medical Missionary. Stipend £150, with lodging, and liberty of private practice.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Senior and Junior Resident Officers. Salary £100 and £80 per annum respectively, withapartments and board.

LAMPETER UNION.—Medical Officer, Medical Officer of Health, and Public Vaccinator. Salaries and fees about £80 per annum.

LEEDS GENERAL INFIRMARY.—Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

NORFOLK AND NORWICH HOSPITAL.—Resident Secretary and House Steward.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary £150, with free house.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor.—Assistant Resident Medical Officer. Small honorarium.

SUNDERLAND INFIRMARY.—House-Physician. Salary £80, rising £10 annually to £100, with board and residence.

TOTTENHAM HOSPITAL, N.—Assistant House-Surgeon. No salary, but residence and board.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, Welbeck-street, W.—Physician.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House-Surgeon and Secretary. Salary £80 per annum, rising by annual increments of £10 to £100 per annum, with residence, board, washing, and attendance.

Births, Marriages, and Deaths.

BIRTH.

MURRAY.—On the 14th inst., at Swinburne Castle, Northumberland, the wife of William Murray, M.D., F.R.C.P.Lond., of a daughter.

MARRIAGES.

BLOOD—DUDGEON.—On the 20th inst., at All Saints', Blackrock, county Dublin, Joseph Blood, of the Indian Medical Service, to Eliza, fourth daughter of Henry James Dudgeon, of The Priory, Blackrock, county Dublin.

CASSIDI—DUNCANSON.—On the 20th inst., at St. Mary's Church, Dublin, Francis Richard Cassidi, M.D., to Marion E., younger daughter of the late John Duncanson, M.D., of Alloa, N.B.

FITZGERALD—FINUCANE.—On the 20th inst., at Hamilton, Ontario, Canada, Michael FitzGerald, Staff-Surgeon, R.N., to Florence Maria, eldest daughter of Deputy Inspector-General Finucane, R.N.

PITT—HERIOT.—On the 20th inst., at the Parish Church, Harrow Weald, George Newton Pitt, M.D., M.A., M.R.C.P., Assistant Physician at Guy's Hospital, late Fellow of Clare College, Cambridge, to Jane Elizabeth, eldest daughter of Robert Heriot, Esq., of Graemes Dyke, Harrow Weald.

RICHARDSON—REECE.—On the 21st inst., at the Parish Church, Hove, by the Rev. T. Peacey, M.A., Vicar, Adolphus Joseph Richardson, M.A., M.B.Cantab., M.R.C.P.Lond., of St. John's-terrace, Hove, to Kitty H. (Tiny), only daughter of the late Geo. Reece, of Edwardes-place, Kensington.

WEEKS—PRANGLEY.—On the 20th inst., at Aylsham Parish Church, by the Rev. Robt. Hake, Vicar, assisted by the Rev. A. Law, Ernest Alfred Weeks, of Willesden-green, to Muriel Maude (Dolly), younger daughter of Thomas Prangley, M.R.C.S., of Aylsham, Norfolk.

DEATHS.

ATKINSON.—On the 25th inst., at Kew, Surrey, John Charles Atkinson, M.D., aged 76.

CHEETHAM.—On the 20th inst., at Compton-road, Canonbury, Joseph Cheetham, M.D., M.R.C.S., aged 68.

COOPER.—On the 25th inst., at Buxton, Frederick Cooper, H.M.'s late Inspector-General of Hospitals (India), aged 83.

ENGALL.—On the 18th inst., Thomas Engall, M.R.C.S., of Lady Somerset-road, N.W., formerly of Euston-square, in his 86th year.

GRANT.—On the 19th inst., at Lagos, West Africa, Charles Scovell Grant, M.D., Colonial Surgeon.

GREEN.—On the 21st inst., at Lynchmere, Harold-road, Upper Norwood, William Abbott Green, Inspector-General of Hospitals, Bengal (retired), and Honorary Surgeon to the Queen, aged 79.

PRICE.—On the 18th inst., at Pontresina, Switzerland, John Price, Surgeon, R.N., aged 32.

ROWE.—On the 25th inst., at Haverfordwest, Thomas Henry Rowe, M.R.C.S., J.P., aged 47.

STEPHEN.—On the 19th inst., at Windlesham Lodge, Bagshot, Andrew Stephen, M.D., of 58, Queen's-gate-terrace, Kensington, aged 53.

WARD.—On the 1st inst., at Rangoon, George James Ward, M.R.C.S., L.R.C.P.Ed., I.M.D., 5th Bombay Light Infantry, aged 34.

WILKINS.—On the 19th inst., Arthur Frederick Wilkins, M.R.C.S., L.R.C.P.Ed., aged 29.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 28th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 22	30·10	S.E.	61	58	105	80	55	...	Hazy
,, 23	30·17	N.E.	68	60	117	82	60	...	Bright
,, 24	30·01	W.	68	61	120	79	58	...	Cloudy
,, 25	29·81	N.E.	62	60	91	72	60	·31	Cloudy
,, 26	29·75	S.W.	66	60	111	77	60	...	Cloudy
,, 27	29·66	W.	68	63	121	77	63	·09	Cloudy
,, 28	30·09	W.	67	61	123	73	59	...	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

INTEMPERANCE AMONGST WORKMEN.

THE *Concordia* reports the fact that various large employers of labour in Germany have been devising a means of stopping the drinking of brandy by their workmen. The experiment has been tried of distributing coffee gratuitously, and the results have been, it is said, of a satisfactory character.

Mr. J. Martin.—The cases recorded seem quite insufficient to prove injury to health from butter substitutes in the face of the mass of evidence to the contrary. As for the name, "margarine" has been settled by Government and adopted in the Bill now before Parliament, so that it is not easy to see what our correspondent wishes to prove.

Viator.—It is both customary and reasonable for a general practitioner to charge more for visiting several members of a family than for visiting one.

Mr. H. J. Dixon's communication arrived too late for publication this week.

Dencer.—The paper has been received.

THE BRUSSELS UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—In the current number of THE LANCET, at page 186, under the heading "Foreign University Intelligence," you have inadvertently published a statement relating to the examinations for the Brussels degree in medicine which is calculated to mislead English practitioners who may contemplate presenting themselves at that University for examination. Permit me to point out to you that not only is the Second Doctorate examination *not* "one of the earlier examinations from which English practitioners who seek Brussels degrees are exempt," but that every candidate, no matter what his nationality, must pass the First as well as the Second Doctorate (which examinations some of the rejected have good cause to remember) before being admitted to the Final or Third.

I am, Sirs, yours faithfully,

July 23rd, 1887. M.D. BRUX., &c.

Mr. B. H. Mumby (Portsmouth) will find much information in Prof. Storer's book, "Agriculture in some of its relations with Chemistry"—a work which will very shortly receive notice at our hands.

IN-DOOR PUPILS.

To the Editors of THE LANCET.

SIRS,—Could any of your readers oblige a brother medical man by informing him of any hospital or infirmary where in-door pupils are taken on moderate terms per annum?—I am, Sirs, yours faithfully,

July 27th, 1887. C. C.

CAMELS FOR THE WOUNDED IN WAR.

AT Massowah the Italian Medical Staff have completed a course of experiments with the object of utilising camels for the conveyance of the sick and wounded. Each camel will be so equipped as to carry with the minimum of discomfort three patients—one on the back and two at the sides. Every sanitary convoy is henceforth to consist of one camel and two mules, to transport five sick or wounded.

Mr. S. Grenfell.—The question is too vague to admit of a precise answer. Dr. Murchison's work on the "Continued Fevers of Great Britain," re-edited by Dr. Cayley, deals exhaustively with this question as regards typhoid fever. With reference to scarlet fever and diphtheria, the evidence as to the influence of sewer air in their production—whether that air contains the infection of those diseases or acts *per se*—is mainly embodied in local reports of officers of health. Much the same applies to such other diseases as erysipelas and blood-poisoning. The history of such cases is scattered, and not put together, in so far as this special method of causation is concerned.

Enquirens.—If lymph is to be used within a short period after it is collected—i.e., after a few days,—it is best preserved on ivory points; if after a long period, it is then best preserved in tubes.

Mrs. Clarke had better apply to the Secretary of University College Hospital.

Mr. F. E. Marston.—Tickets were sent to the medical corporations.

"VOMITING PERSISTING FOR YEARS."

To the Editors of THE LANCET.

SIRS,—*Apropos* of the two cases of persistent vomiting alluded to in THE LANCET of the 9th and 16th inst., the following one of twelve or fifteen years' standing may prove interesting to your readers if you will oblige me by inserting it in your columns.

The patient is a lady over fifty years of age, of small frame, thin, and with very soft tissues; naturally of an active temperament; now, of course, greatly subdued by the long and unceasing strain upon her system. She is certainly not hysterically inclined. Her face has a careworn aspect, and its features have rather a pinched and sunken appearance. Her tongue is always moist, foul, and sometimes slightly furred. In the submaxillary region are two soft-feeling glands, clearly defined, and projecting above the surrounding tissues. From these active little organs flows almost a continuous stream of saliva, causing a most annoying ptyalism, and whilst the lady is conversing filling her mouth with saliva. The bowels are always costive, only yielding to an enema. The stools are, however, natural in colour and consistence. There is no history or symptoms of malignant disease or gastric ulcer, except an attack of hæmatemesis many years ago. No complaint is ever made of cerebral symptoms, and the liver, kidneys, and uterus appear to be sound. Digestion is good, Welsh rare-bit being one of the dishes most appreciated by the stomach, which, however, is rather fastidious. I cannot detect that one kind of food causes emesis more than another: I mean foods which are suggested by the appetite. Never a day passes without this capricious organ disgorging a portion of its contents, the attack always being heralded by nausea. The stomach, like an irritable uterus, seems to have contracted the bad habit of expelling as a foreign body its natural burden. I say the digestion is good, because what is vomited is well digested, having the appearance of panado, floating, however, in an excess of limpid fluid. I can find no sign of enlargement. Sir Andrew Clark, who some time since kindly saw the case with me, thought he did. The body being thin, the slightest deviation from the natural condition of things could easily be detected at the present time. I have tried every so-called remedy in the Pharmacopœia without any appreciable benefit accruing. Peptonised milk is as efficacious as anything, for it is bland and soothing to the organ when more than usually irritable. Effervescing drinks painfully distress the patient. Alkalies to increase and acids to check the flow of gastric juice are alike futile. My view of the case is the following:—That there is a thickening of the pylorus, not necessarily of a malignant character, which only permits a certain portion of the digested food to pass in a given time. The large quantity of saliva which is constantly being secreted and swallowed disturbs the stomach, thus irritating the diaphragm, and so in the usual way exciting vomiting by its upheavings. In a few words, vomiting is caused by a contracted pylorus and excess of fluid. How much habit is a factor in the operation I know not. Pathologists might smile incredulously if I ventured to be too dogmatic upon this point. Two symptoms are always present—pyrosis and cardialgia, to use an old incongruous word. According to our present ideas, an overflow of saliva should neutralise acids, but in the case under notice neither saliva nor artificial antacids have any neutralising effect whatever. If neither unnatural distension of the stomach by the excess of a natural stomachic stimulant, nor contraction of its pyloric extremity, produces the constant emesis, we must, I suppose, look further, as in glycosuria, and conclude that some hidden and mysterious pathological condition of the much-abused little fourth ventricle, or the corpus striatum, or optic thalamus of the right side, is the direct cause of the disturbance. I may add that I have failed to discern sarcina ventriculi, although the vomit certainly seems at times to be in a state of fermentation.

Hoping some of your readers more capable than myself of solving this mystery may be able to throw some light upon my darkness,

I have the honour to be, Sirs, your obedient servant,

Finsbury-circus, E.C., July 20th, 1887. HARVEY J. PHILPOT.

PROPOSED ARTIFICIAL SEA-WATER LAKE FOR SOUTHPORT.

THE gradual retirement of the sea from the town of Southport has long had an unfavourable influence on this pleasant seaside resort. We have before us a scheme invented by Mr. Lightowler, a Southport tradesman, and developed by Mr. B. H. Thwaite, C.E., of Liverpool, that is intended to minimise the defect mentioned. Mr. Lightowler's scheme consists in the construction of a dwarf breakwater of a novel sectional form along the beach, in such a position that during abnormal or spring tides, or when the water at rare intervals reaches nearly to the esplanade, the water accumulated therein, or behind the breakwater, is retained, and cannot escape, except the sluice-gates provided are opened. The breakwater is constructed of such a height as to retain water of an average depth of, say, 2 ft. on the inside of the breakwater, and such water would then form a lake of a superficial area equal to 201 acres, and form a healthful adjunct to the town of Southport. The breakwater is designed so as to provide a drive of six yards in width. The sectional form of the breakwater, which is intended to be constructed entirely of Portland cement concrete, possesses some novel features. It is hollow in section, and provides a silt depositing canal for the collection of the silt sand and offensive organic matter brought forward and held in suspension by the sea water when in motion, but which are deposited when the water is in a quiescent condition in the depositing canal. By this means the artificial lake is kept pure. The height of the proposed breakwater is such as not to interfere with the seascape, and the reach of sand between the breakwater and the line of sea at low tide would be lost in the line of sight of an observer standing on the esplanade. Consequently, the sea would appear to reach continuously up to the foot of the esplanade. The advantages of what is practically the bringing of the sea back to Southport will be obvious to anyone, and its applicability to seaside resorts similarly situated to Southport need not be dilated upon.

Puzzled.—The circumstances detailed by our correspondent are very annoying. It is to be regretted that, on seeing the letters, and especially on seeing the individual, "Puzzled" did not decline his services. He should see the gentleman who recommended the *loc. in tenens*, and if the representations concerning the qualifications are false he should refuse the fee claimed, if not undertake proceedings to expose the individual in question. If, on the other hand, he possesses such qualifications, we should recommend our correspondent to pay. It is always unwise to enter into such arrangements without both seeing the person and having the most definite understanding with him as to terms in writing.

Probang.—Such a practitioner can only enforce payment on account of surgical cases. He can keep an open surgery.

420 has not enclosed his card.

TREATMENT OF LUPUS.

To the Editors of THE LANCET.

SIRS,—Dr. Drewitt, at the meeting of the Clinical Society of London on May 27th last, stated that he had used salicylic acid and creasote with good effects in lupus. Would Dr. Drewitt kindly state the proportions of the application and the method, &c., of applying, as I have a very obstinate case in hand.—I am, Sirs, yours faithfully,

WILLIAM H. MACDONALD, M.D.

Antigonishe, N.S., Canada, July 11th, 1887.

Dr. T. P. Smith.—There is, as far as we know, no restriction as to the length of the essays. It would be well for intending competitors to write to the Secretario de Gobierno, Calle del Triador, No. 11, Valencia, for details as to the conditions of the competition.

Mr. T. Laffan.—The hon. secretaries may be addressed, 61, Kennington-park-road, S.E.

Taxpayer will find a letter on the subject in THE LANCET of December 6th, 1884.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Gant, London; Surgeon-Major Doble, Kamptee; Dr. W. E. Steavenson, London; Mr. Vincent Jackson, Wolverhampton; Dr. A. H. Hassall, Lucerne; Sir G. H. B. Macleod, Glasgow; Dr. Gowers; Mr. Godlee, London; Mr. H. A. Reeves, London; Dr. Purcell, London; Mr. A. F. Mickle, London; Mr. T. Holmes, London; Surgeon-Major Hume; Dr. W. H. Macdonald, Antigonishe, Canada; Messrs. Macmillan and Co., Cambridge; Mr. A. G. Bateman, London; Messrs. Richardson and Sons, London; Mr. D. Stewart, Nottingham; Messrs. Allen and Sons, London; Lieutenant-Colonel Brayam, Bristol; Messrs. Eason and Son, Dublin; Lieutenant Beresford, Belfast; Messrs. Robertson and Scott, Edinburgh; Mr. Owthwaite, London; Messrs. Blake and Co., Leeds; Mr. Barwell, London; Surgeon-Major Harvey; Mr. Van Praagh, London; Mr. R. J. Reece, London; Dr. Batten, Gloucester; Mr. Mumby, Portsmouth; Mr. B. Walker, Spondon; Dr. R. Spencer.

Chatham; Mr. Evans, Oswestry; Mr. Shelley, Bilston; Miss Taylor, Cambridge; Miss Morehouse, London; Mr. Kito, London; Mr. Evans, London; Mr. Pike, Gloucester; Mr. Brocklehurst, Leeds; Mr. Henry, Halifax; Mr. Whittley, Wisbech; Mr. Addison, Glasgow; Mr. Newton, Liverpool; Surgeon-Major Roysted, Morden; Messrs. Mumford and Co., Bradford; Mr. Laseron; Mr. Hosegood, London; Messrs. Boord and Son, London; Mrs. Warburton, Baden; Messrs. Wyleys and Co., Coventry; Mr. Blair, Leeds; Mr. Richards, London; Messrs. Hills and Son, Dover; Mr. H. A. Powell, Beckenham; Mr. Beales, Great Yarmouth; Mr. Prangley, Aylsham; Mrs. Clark; Dr. Reid, King's Lynn; Mr. Sansbury, London; Mr. Hills, Wandsworth; Mr. Cameron Gillies, Brockley; Mr. H. B. Thwaite, Liverpool; Messrs. Fletcher and Co., Holloway; Dr. F. W. Bennett, Leicester; Messrs. Ingram and Son, Hackney; Mrs. Maitland, London; Messrs. Calvert, Manchester; Dr. Williams, Truro; Mr. Faulkner, London; Dr. Royle, Jersey; Mr. W. Besant, London; Mr. Maw, Bradford; Mr. Saunders, Manchester; Mr. Robinson, Sutherland; Mr. Skrimshire, Blaenavon; Mr. Johnston, Glasgow; Mr. Musgrave, Dorchester; Dr. Robertson, Oldham; Mr. Brown, London; Mr. Patten, London; Mr. Tarner, Mexborough; Mr. G. S. Dokoshian, Constantinople; Dr. E. May, Hanwell; Mr. F. A. Southam, Manchester; Mr. G. R. Murray, London; Dr. Lovett, London; Dr. Fleming, Glasgow; Mr. W. J. Penny, Bristol; Dr. Tomkins, Leicester; Mr. Blmguraty, Sarm; A Qualified Assistant; A Taxpayer; F. E. M.; Viator; M.D. Brux.; Probang; 420; Army Surgeon; Secretary, Southsea; D. C. A.; M. S. D.; Medicus, Long Eaton; M.B., London; Enquirer; C. C.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Lawson Tait, Birmingham; Mr. Broadbent, London; Dr. Armstrong, South Shields; Dr. Squire, London; Mr. Lacy, Holborn; Messrs. Merritt and Hatcher, London; Miss Bartlett, Tunbridge; Messrs. Robbins and Co., London; Mr. Barbour; Mr. Kerr, Glasgow; Dr. Lane, San Francisco; Dr. Barr, Glasgow; Mr. Sargent, London; Messrs. Gale and Co., London; Mr. Pace, Newcastle-on-Tyne; Messrs. Roberts and Co., London; Mr. Richardson, London; Dr. Horne; Messrs. Bennett Bros., Salisbury; Mr. Crawford, Sevenoaks; Mr. Wadham, Darlington; Mr. Torrance, Blofield; Mr. Irwing, Lancaster; Mr. Martindale, London; Mr. Hamel, Tamworth; Mr. Smyth, Monaghan; Mr. T. B. Browne, London; Mr. Armstrong, Manchester; Dr. Glover, London; Mr. Jordan, Manchester; Mr. Hughes, Ombersley; Mr. Hornibrook, London; Miss Olbey, Whetley; Mr. Saunders, Bideford; Mr. Scott, Lanark; Messrs. Hester, London; Mr. Milne, London; Mr. Solomon, Ostend; Mr. Ottley, Attercliffe; Mr. Hicks, Bodmin; Mr. Gould, Aylsham; Mr. Robson, Leeds; Mr. Greathead, Reeth; Dr. Oliver, Newcastle-on-Tyne; Mr. Lee, Bristol; Mr. Barnes, Wells; Dr. Dowse, London; Mr. Crasweller; Mr. Bainbridge, Reigate; Mr. Davenport; L. H., Llanelly; Secretary, Devonport; C. A. C. S., Edinburgh; J. C., Eastbourne; Secretary, Wolverhampton; Endymion, Chelsea; M.A., London; E. R.; A. M. D., Scarborough; M.B., Monkstown; Lady Superintendent, Burton-on-Trent; Secretary, Hastings; Medicus, Newcastle-on-Tyne; Manchester; J. C., Southsea; H. A. S.; M.A., Lutterworth; Doctor, Tottenham; Surgeon, London; Veritas, Croxdale; A. B., Twickenham; M. E. A.; X., London; Medicus, New Basford; O. S. W., Dartmouth; C. J. G., Preston; W. M., Wisbech; C. B., London; G., Whitby; G. P., London; J. M., Bedford; Y. Z., London; Gamma, Manchester; Excelsior; Scotland; F. G. L., Bury St. Edmunds; A. S., London; Medicus, Worsley; Pato; Medicus, Brighton; Surgeon, Coventry; A. L., Bayswater; L. A.; Medicus, Dorchester; A. S., Birmingham; Alpha, London; W. J.; Medicus, Reading; H. F., Barnstaple; Medicus, Everton; M. H.; A. A., Great Bridge; D. H., Deal.

Nottingham Daily Guardian, Manchester Examiner, Keble's Margate and Ramsgate Gazette, Bromley Telegraph, Hull Express, Tenby Observer, Hull Weekly Express, Kent County Standard, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 2.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, August 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, August 5.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 6.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year	£1 12 6	Six Months	£0 16 3
To CHINA AND INDIA	One Year		1 16 10
To THE CONTINENT, COLONIES, AND UNITED STATES	Ditto		1 14 8

Post Office Orders should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable at the Post Office, Charing-cross.

Notices of Births, Marriages, and Deaths are charged five shillings.

Cheques to be crossed "London and Westminster Bank."

ADVERTISING.

Books and Publications (seven lines and under)	£0	5	0
Official and General Announcements	0	5	0
Trade and Miscellaneous Advertisements	0	4	6
Every additional Line	0	0	6
Front Page	0	1	0
Quarter Page	1	10	0
Half a Page	2	15	0
An entire Page	5	5	0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.